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Eyre Peninsula
Rural Landholder Social Benchmarking Report 2025

Project 1.2.007

Soil CRC Social Benchmarking of Rural Landholders Across Australia

Murdoch University

AIR EP Ag Innovation & Research Eyre Peninsula

LANDSCAPE SOUTH AUSTRALIA EYRE PENINSULA

Charles Sturt University

RESEARCH COMMISSIONED BY: THE COOPERATIVE RESEARCH CENTRE FOR HIGH PERFORMANCE SOILS (SOIL CRC), AIR EP AND THE EYRE PENINSULA LANDSCAPE BOARD.

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DISCLAIMER

The views expressed in this report are solely the authors', and do not necessarily reflect the views of Murdoch University, the Soil Cooperative Research Centre or the people consulted during the research project.

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Finally, we would like to thank all the landholders who took the time to complete the survey.

LIST OF ACRONYMS

AIR EP – Agricultural Innovation and Research Eyre Peninsula

CSU – Charles Sturt University

FTF – Full-time Farmer

GIS – Geographic Information System

HF – Hobby Farmer

LGA – Local Government Area

NF – Non-farmer

NRM – Natural Resource Management

PTF – Part-time Farmer

Soil CRC – Cooperative Research Centre for High Performance Soils

Lifestyler – Hobby Farmers and Non-Farmers combined

LEGEND

*** Significant difference by rainfall zone

Significant difference by generation

EXECUTIVE SUMMARY

The 2024 Eyre Peninsula Rural Landholder Social Benchmarking Report reports on one of twelve rural landholder surveys being undertaken in six Australian farming regions and follows up on a survey undertaken by our team in this region in 2020. This work is funded by Program 1 of the Cooperative Research Centre for High Performance Soils (Soil CRC), which is focused on improving our understanding of social and economic factors driving decision-making and uptake of soil innovations, including levers for change. Murdoch University researchers partnered with Charles Sturt University, AIR EP and the South Australian Eyre Peninsula Landscape Board to develop and undertake the survey.

Led by Associate Professor Hanabeth Luke of Murdoch University, the primary objective of the 'Surveying On-Farm Practices' project is to deliver regionally relevant surveys in partnership with local farming and natural resource management (NRM) organisations across five Australian states. The project is designed to generate robust and accurate data that can inform and support improved knowledge-sharing and uptake of soil and land management practices for these local supporting organisations, as well as at broader scales. This project is building a dataset of national importance, capturing both a breadth and depth of information related to on-farm decision-making among Australian landholders.

The survey gathers detailed information about actual and intended on-farm practices, alongside the challenges, goals, and aspirations of respondents. In addition, it collects contextual data concerning management styles, landholder values, self-assessed knowledge and confidence in recommended practices, and perceptions of agricultural risk. To ensure consistency and facilitate comparison across regions, a core set of questions related to general soil management principles and landholder demographics is retained in every iteration of the survey, with local workshops used to identify local topics of importance for building into the survey, and to inform reporting. The systematic survey method undertaken builds on best-practice survey methods (Luke, 2025), including the foundational work of Professor Allan Curtis (Curtis & Terry, 1998).

Associate Professor Luke met with representatives of AIR EP and the Eyre Peninsula Landscape Board in Port Lincoln in November 2023. This workshop identified several new key topics and questions, with a focus on the complexities involved in decision-making about farms, land management and farming resilience, with a focus on soil health, emissions, biodiversity and adaptation strategies. Questions were raised about what drives farmers to change, to improve their soil health and build resilience over different timeframes, from income diversity to disaster response planning. Farmer attitudes towards regenerative agriculture, precision-farming and minimisation of inputs were important topics given elevated and fluctuating input costs. Also included were the perceived state of soil health and drivers of increased profitability and food quality. Soil testing regimes and how on-farm data were being used were raised as important. A questionnaire was drafted and piloted with local partners and a small group of rural landholders. Some minor revisions were made following this. The final questionnaire is presented in Appendix 2.

In mid-2024, a survey booklet was mailed to every rural property owner holding land on the Eyre Peninsula over 10ha in size (as outlined from council data N=1805). Demographic and descriptive characteristics were collected to contextualise responses including general personal and property information, e.g. property size, absentee ownership, as well as asking respondents to identify as full-time, part-time, hobby farmers, or non-farmers. This background information was used to check for sampling bias and to enable correlations to be sought between contextual variables and practice change. This report presents a comprehensive profile of landholders on South Australia's Eyre Peninsula based on survey data collected in 2020 (Luke et al., 2020) and 2024. To simplify interpretation, we have divided landholders into two main groups: production-focused farmers (full-time and part-time) and those who may be more lifestyle focused (hobby farmers and non-farmers).

PROFILE OF FARMING

The demographic and operational profiles of landholder types differed markedly (Table 1). Of those who responded to the study, full-time farmers were younger, owned and managed larger holdings, and demonstrated higher levels of engagement with on-farm work and agricultural income. They reported the lowest reliance on off-property income and were the most active in attending training and field days. Part-time farmers, while still significantly involved in agriculture, balanced farming with other employment and were less likely to reside on their properties. Farmer goals revealed a strong alignment between production and stewardship. The majority aimed to improve soil health, biodiversity, and long-term viability, often framed as a legacy for future generations. Economic sustainability remained central, with high importance placed on profitability, succession, and the farm as a family asset. Farmers viewed their work as a way of life, deeply tied to identity, community, and pride in producing food.

Hobby farmers and non-farmers (henceforth referred to as lifestylers) typically manage smaller or inherited landholdings with minimal agricultural engagement. These groups displayed low participation in farm-based learning and planning activities, highlighting their limited operational focus. In contrast to full-time and part-time farmers, lifestylers prioritised lifestyle, recreation, and environmental aesthetics over productivity or profit, viewing their properties as personal or conservation investments rather than commercial enterprises.

Survey data on landholder values demonstrated increasing importance placed on biospheric and social considerations. Egoistic values such as income and business success continue to be important, particularly for farmers, though some indicators suggested a slight decline in emphasis on productivity. Altruistic values, including family, community, and opportunities for learning, remained steady or increased, reinforcing the multidimensional role of land in shaping personal and social identity across landholder types.

Table 1. Profile of farmers (full-time and part-time amalgamated) and lifestylers (hobby and non-farmers) from the 2024 Eyre Peninsula Landholder Survey (N=435)

Landholder characteristic	Farmers (full-time and part-time)	Lifestylers (hobby farmers and non-farmers)
Age of respondent	57 years	62 years
Mean area owned	2943ha	1175ha
Mean on-property hours work/week	50hrs	10hrs
Resident on property	82%	51%
Proportion earning a net on-farm profit	79% yes	26% yes
Top landholder attached values (% important/very important)	Ability to pass on a healthier environment (96%), sense of accomplishment from building/ maintaining a viable business (93%)	Ability to pass on a healthier environment (84%), native vegetation provides habitat for birds and animals (80%)
Top landholder guiding principles (% important/very important)	Creating wealth and striving for a financially profitable business (84%), respecting the earth and living in harmony with nature (66%)	Respecting the earth and living in harmony with nature (93%), caring for vulnerable people and correcting social injustice (63%)
Top land uses	Cereals (90%), sheep (79%), pasture (66%)	Sheep (43%), area of remnant native vegetation (36%), cereals (36%)
Top management practices in the past 4 years	Minimum or no-till (66%), preparation of fertiliser budget (61%), planting legumes (55%)	Minimum or no-till (28%), planting of trees and shrubs (24%), maintaining ground cover (22%)
Top modes of information	Field days (60%), websites (50%), newspapers (47%)	Websites (34%), field days (24%), radio (24%)
Top sources of information	Other farmers (84%), my own knowledge from experience (66%), friends/neighbours/ relatives (64%)	Other farmers (48%), BOM (37%), my own knowledge from experience (35%)
Timeframe considered for strategic planning	Up to 5 years (35%), year to year (24%)	Up to 5 years (33%), year to year (17%)
The decision-making team	Multi-generations of family (43%), me and my partner (34%)	Me and my partner (43%), mostly just me (25%)

Guiding principles reflected two value orientations: financial prosperity is paramount for the farmer group, whereas environmental ethics dominate among the Lifestyler group. Despite a modest decline, the principle of "respecting the earth" remained widely valued, particularly amongst lifestyle-oriented landholders. Social justice also held moderate importance, especially for part-time and hobby farmers. Personal influence and prestige

were generally low priorities. Collectively, these findings point to a landholder community that values sustainability, stewardship, and resilience, with diverse motivations shaped by the intensity of agricultural engagement and the role that land plays in their lives.

COMPLEX DECISIONS IN FARMING & LAND MANAGEMENT

Over the past four years, survey data revealed that farmers, both full-time and part-time, were increasingly incorporating complex and adaptive strategies to support sustainable land management. Central to these strategies was the implementation of practices that enhanced soil health, input efficiency, and resilience to climate variability. Techniques such as minimum or no-tillage (66%), fertiliser budgeting (61%), soil testing (55%), and legume planting (55%) were widely adopted amongst farmers. In addition, the use of precision agriculture (53%) and maintenance of groundcover (53%) illustrated a shift towards data-driven and environmentally conscious decision-making. These approaches reflect landholders' efforts to manage ecological and economic pressures through integrated, long-term planning.

In contrast, lifestylers prioritised conservation-oriented outcomes over production (Table. 2). Their most common practices when combined (outside of minimum/no till 28%), were tree and shrub planting (24%), groundcover maintenance (22%), and fencing of native bush/grassland (21%), highlighting a commitment to biodiversity and ecological stewardship.

Table 2. A summary of the top management practices implemented sometime in the past four years by full-time farmers and all landholders for the Eyre Peninsula Landholder Survey in 2020 (n=464-466) and 2024 (n=422). Note, 2020 data was collected for the period of 1-5 years previous to the survey.

Management practice	% Implemented sometime in past 4 years			
	Overall (2020)	Overall (2024)	Full-time (2020)	Full-time (2024)
[1] Use of minimum or no-tillage techniques	44%	59%***	58%	69%
[1] Preparation of a fertiliser budget/plan for all/most of the property	21%	51%#	26%	65%
[1] Maintaining at least 70% groundcover (in non-drought years)	NA	47%	NA	53%
[1] Plant legumes (e.g. lucerne, clover, medics, pulses)	42%***	47%#	52%	60%
[1] Testing of soils to understand soil condition	40%	45%#	49%	59%

[1] Question not included in both surveys or slight difference in wording between survey years - see appendix Table X11

*** Significant difference by rainfall zone (2020 was assessed using low, medium and high rainfall zones while 2024 was assessed using low and medium/high amalgamated). # Significant difference by generation (2024 only)

Despite differing motivations between the farming and Lifestyler groups, both show emerging interest in regenerative agriculture and carbon farming, suggesting a convergence around long-term sustainability goals and shared values regarding land care and climate responsibility.

Landholder decision-making was influenced by their confidence in established best practices and their assessment of financial and environmental risks. Practices like stubble retention, soil testing, and monitoring biological activity enjoy strong confidence, though trust in these methods has declined slightly since 2020, potentially due to growing complexity and uncertainty in the operating environment (Table X4). More capital-intensive investments, such as lime application and perennial pastures, remain less widely supported due to perceived economic risk. However, 63% of respondents agreed that short-term productivity losses were acceptable if long-term outcomes proved beneficial, demonstrating a strategic mindset open to transformational change when justified by clear, enduring benefits.

Over time, however, there appears to have been a modest decline in landholders' willingness to take risks or embrace experimentation (Figure 1). While openness to new ideas remained high (87%), fewer respondents felt financially able or personally inclined to undertake risky or unproven approaches. Part-time farmers showed the highest capacity and openness to risk, likely due to diversified income streams and occupational flexibility. Full-time farmers, while more likely to adopt innovations early, reported time as a limiting factor. Non-farmers and hobbyists were generally more risk-averse, often lacking the financial flexibility or operational incentives to experiment. These trends underscore the role of identity, resource base, and social perspective in shaping complex land management decisions.

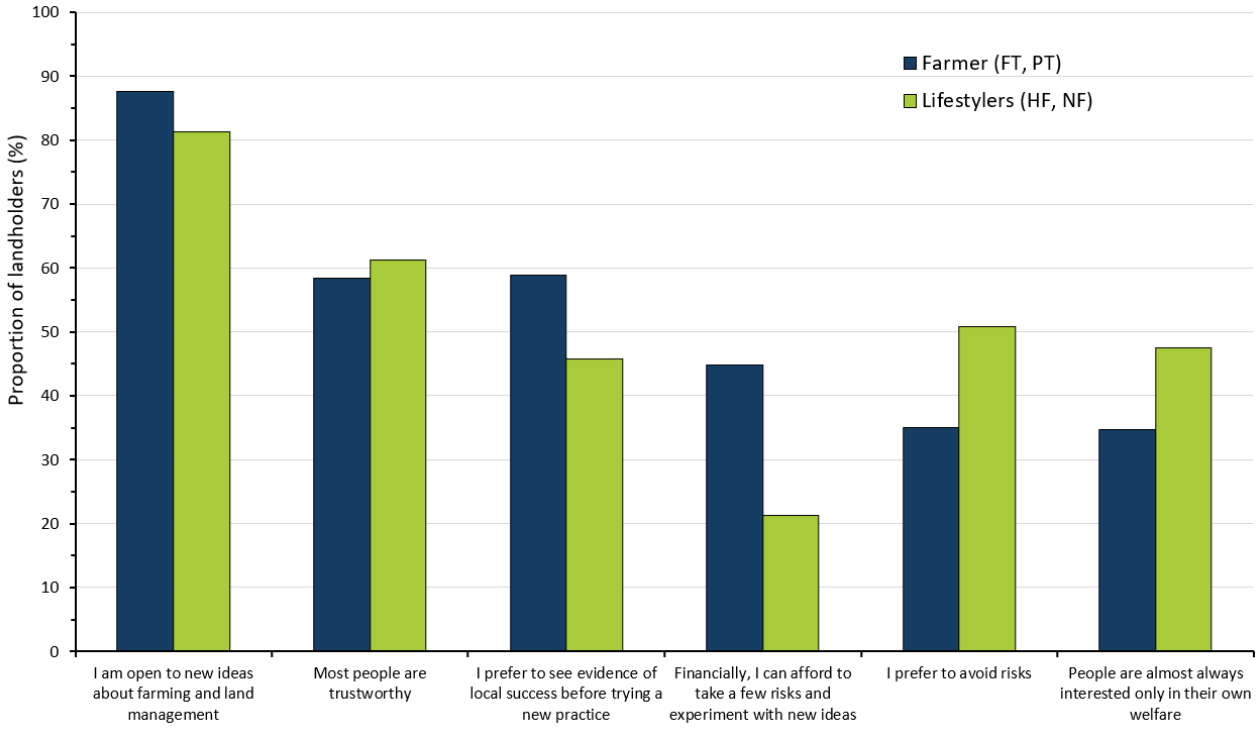

Figure 1. Risk attitudes of farmers (full-time and part-time) and lifestylers (hobby and non-farmers) identified in the 2024 Eyre Peninsula Landholder Survey (n=373-380).

Strategic and structural planning timelines further differentiated landholders. Full-time farmers tended to plan within five-year or medium-term horizons (up to 20 years), reflecting enterprise longevity and intergenerational involvement. In contrast, non-farmers were more inclined towards short-term or ad hoc decision-making, with limited long-term strategic focus. Decision-making structures also varied with multi-generational input common among full-time farmers (50%), while hobby and non-farming landholders often made decisions individually or with a partner. Use of professional advice and technical support was more prevalent amongst commercial farmers, whereas non-farmers relied more heavily on property managers. These differences highlight how ownership structure, enterprise goals, and future outlook all contribute to the complex and diverse landscape of decision-making in farming and land management.

Best-practice modelling

A number of best-practices for farm, soil and land management were modelled using linear or logistical regression modelling, with the following outcomes:

The strongest linking factors associated with implementation of regenerative agriculture were: decreasing use of synthetic inputs; setting land aside for conservation; concern about landuse changes impacting farmland; working with a sibling on the farm; and knowledge of how to support the persistence of native grasses (R^2=0.42).

The most important factors linked with implementation of precision agriculture were: wanting to be a part of positive change in farming; intention to keep the farm in the family; confidence in the application of deep tillage; concerns about decline of services in rural areas; and increasing chemical application overall (R^2=0.39).

A strong model revealed that the most important factors working together to influence implementation of soil testing were: having land lost due to soil production issues; having completed year 12 (the final year of secondary school); having a whole farm plan in place; an understanding of holistic farm management, and viewing liming as important (R^2=0.64).

ENGAGING LANDHOLDERS

Between 2020 and 2024, landholders on the Eyre Peninsula reported modest improvements in their self-assessed knowledge across key land management and ecological topics. Increases were observed in areas like preparing a farm/property plan and understanding the role of remnant vegetation, reflecting a gradual improvement in both technical and ecological knowledge. However, topics such as establishing perennial pastures and strategies for time-controlled grazing showed limited or no progress, indicating uneven development in certain areas. At the same time, awareness of market mechanisms and Aboriginal group connections remained low, highlighting gaps in cultural and policy knowledge that could be addressed through targeted education.

Across landholder types, full-time farmers consistently reported higher levels of self-assessed knowledge, particularly in applied agronomic topics like property planning and legume/pulse integration. On the other hand, hobby farmers and non-farmers reported having more knowledge in culturally-oriented subjects such as pre-European land use and Aboriginal connections to the land. This disparity suggests that professional farmers

have greater access to specialised knowledge due to their regular involvement in technical networks and decision-making processes. Hobby farmers and non-farmers, being less engaged in intensive agricultural practices, may benefit from education efforts focused on these more specific knowledge gaps.

Soil knowledge showed moderate improvement from 2020 to 2024, particularly in understanding the role of remnant vegetation/understory plants for supporting the local ecosystem (Figure 2). However, some areas, such as knowledge of soil organic matter and the benefits of biological supplements, showed stagnation or slight decline, indicating a continued need for education in these more technical soil management aspects. Full-time farmers reported significantly higher levels of soil knowledge compared to other landholder types, especially in topics like ground cover strategies and soil constraint identification. In contrast, hobby farmers and non-farmers reported lower knowledge levels, revealing a significant gap in technical expertise between farmers and lifestyle-focused landholders.

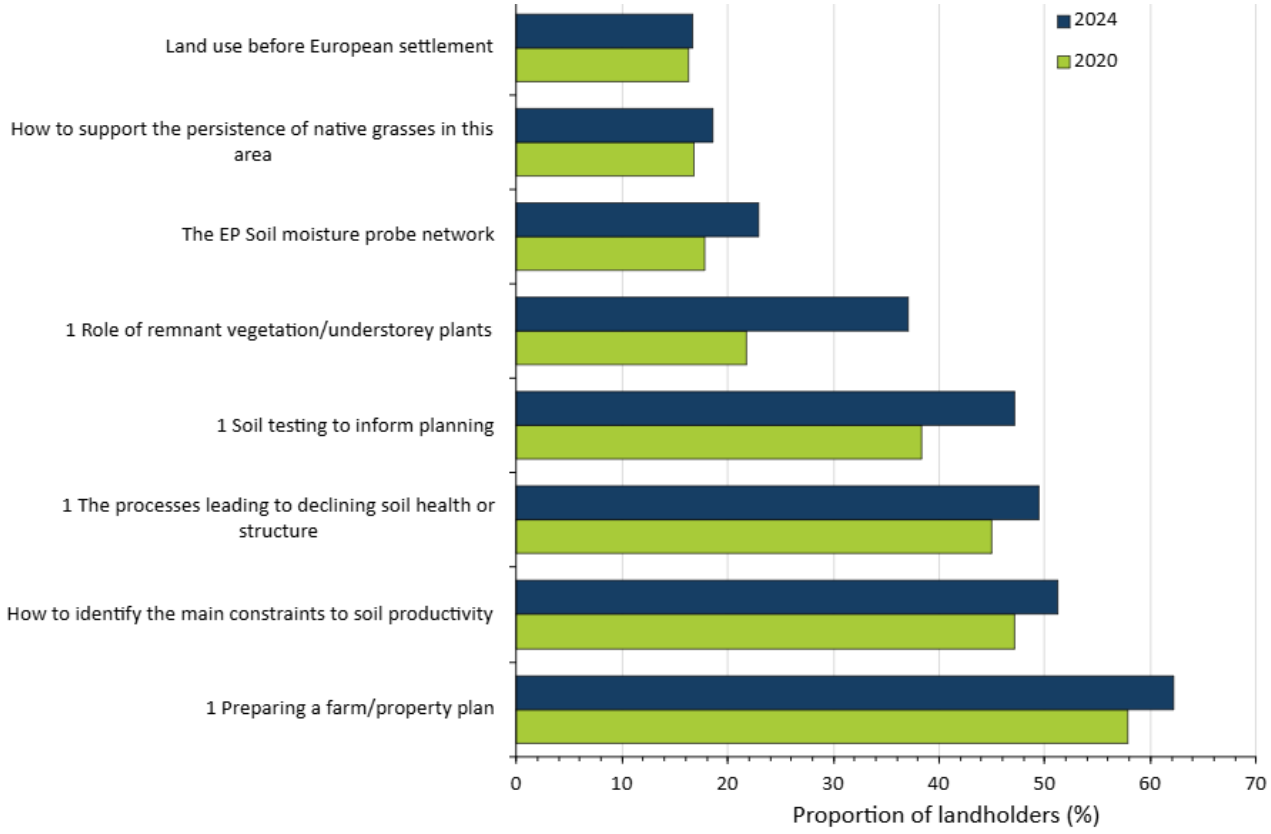

Figure 2. Knowledge topics that have increased between the 2020 (n=430-455) and 2024 (n=338-393) Eyre Peninsula Landholder Survey years. [1] Question not included in both surveys or slight difference in wording between survey years - see appendix Table X11

Between 2020 and 2024, engagement with information sources evolved, with a noticeable decline in the use of both traditional and digital media. Field days remained the most commonly used source of information, followed by websites and newspapers. However, overall engagement with print media and traditional outlets like magazines and television decreased, suggesting a shift towards more specialised or digital information sources. Peer-based information, particularly from other farmers, remained a dominant

feature, however, the use of professional services like independent agricultural consultants declined. This shift in information-seeking behaviours underscores the changing landscape of knowledge dissemination and highlights the growing role of digital platforms.

Generational differences in information consumption were also evident. Younger generations showed greater engagement with digital platforms like websites and emails, while older generations, particularly Baby Boomers+ (1964 and older), continued to rely more on traditional sources such as newspapers and the Bureau of Meteorology. These generational trends reflect a growing preference for digital and online resources among younger landholders, while older landholders may still favour conventional information exchange methods. The continued reliance on peer-to-peer learning and personal networks across all generations highlights the central role of social connections in knowledge sharing, suggesting the need for tailored outreach strategies to cater to diverse age groups and preferences.

LAND MANAGEMENT CHALLENGES

The survey results highlighted a range of challenges experienced by landholders across the Eyre Peninsula, with both regional and property-scale issues reflecting diverse priorities based on landholder type. Regionally, water security emerged as the most pressing concern, noted by over 85% of all landholders, underscoring the critical dependency on reliable water access amidst growing climate variability. Concerns around support for new and young farmers, changing weather patterns, and biodiversity loss were also prominent. Hobby farmers and non-farmers demonstrated a stronger focus on ecological risks such as biosecurity threats and bushfire danger, while full-time producers expressed deep concern over infrastructure and service shortfalls. Property-level issues mirrored these divisions: full-time and part-time farmers prioritised economic and agronomic challenges, such as rising input costs, uncertain returns, and soil health, whereas hobby farmers and non-farmers emphasised climate variability, neighbourly interactions, and ecological concerns. These distinctions reflect differing degrees of production reliance, resource access, and engagement with the land.

Looking to the future, landholders anticipated mounting pressures from economic constraints and climate change. Nevertheless, many landholders identified opportunities for adaptation and resilience through regenerative agriculture, technological innovation, and diversification. Soil-related issues received increasing attention, with growing concern over phosphorus availability and water-holding capacity, particularly among commercial farmers. Furthermore, land lost to productivity due to soil degradation, principally from salinity, magnesia patches and erosion, affected nearly a third of respondents, with the burden falling heaviest on full-time farmers. These findings underscore the multifaceted nature of landholder challenges and point to an urgent need for integrated support, policy reform, and landscape-scale adaptation strategies.

Results outlined significant concerns among landholders regarding water security and its implications for livestock management. Water-related issues were universally ranked as critical, with 86% of respondents highlighting water security as a top concern across all

landholder types. This underscores a shared vulnerability to changing climatic conditions, despite variations in specific concerns such as uncertain returns and weather pattern impacts. Notably, bushfire risks emerged as a predominant concern among hobby and non-farmers, contrasting with relatively lower perceived risks associated with flooding.

Furthermore, the survey indicated a varied landscape in terms of preparedness and adaptation strategies among landholders. Despite high levels of concern, particularly about bushfires, less than half of respondents reported having a disaster response plan in place, underscoring a significant gap between perceived risks and preparedness levels. Views on the need for fundamental changes to farming systems also diverged, with a notable proportion supporting reform to enhance resilience, particularly among part-time farmers and non-farmers advocating for sustainable practices and improved infrastructure support.

Overall, while there was a broad recognition of climate variability and its implications, the report highlighted nuanced differences in perception and response strategies across different landholder categories, emphasising the need for targeted support and engagement to enhance climate resilience in the region.

THE FUTURE OF FARMING

The survey indicated clear generational differences in the adoption of agricultural practices and knowledge systems. Younger cohorts, particularly Generation Y- (born 1981 and later) and Generation X (born 1965–1980), were more engaged with technology-driven and data-informed land management. They reported higher adoption of precision agriculture, soil testing, and fertiliser planning, alongside greater implementation of soil health practices like liming, biological amendments, and deep soil amelioration. These findings suggest a generational shift towards evidence-based and ecologically focused farming, with younger landholders showing stronger investment in long-term soil improvement and sustainability.

Environmental and conservation practices exhibited mixed uptake across generations. Younger respondents were more likely to fence native vegetation and experiment with native grasses, although vegetation removal was also highest among this group, potentially reflecting competing land use pressures. Meanwhile, older generations demonstrated stronger knowledge in cultural and ecological contexts, such as the role of remnant vegetation and Indigenous land-use history. This indicates a division in expertise, with younger farmers prioritising technological and production-oriented innovations, and older cohorts holding deeper ecological and historical insights. Notably, while practices aligned with regenerative agriculture were more common among younger generations, few across any age group self-identified as practising regenerative agriculture, pointing to a potential disconnect between practice and terminology (a similar finding was reported in Alexanderson et al., 2023).

Across the broader population, long-term planning was increasingly centred around investment, diversification, and resilience. A slight majority (54%) of landholders planned to invest in their current property to increase productivity, with diversification through enterprise mix or off-farm income becoming more common (Figure 3.). Just 22% planned

to allocate land for conservation purposes. At the same time, continuity remained a central value: 78% expected their land to stay within the family, though transitions are evolving, with a growing proportion of landholders prepared to move off the property post-retirement. Leasing and share-farming arrangements also continued to feature as flexible alternatives to full ownership.

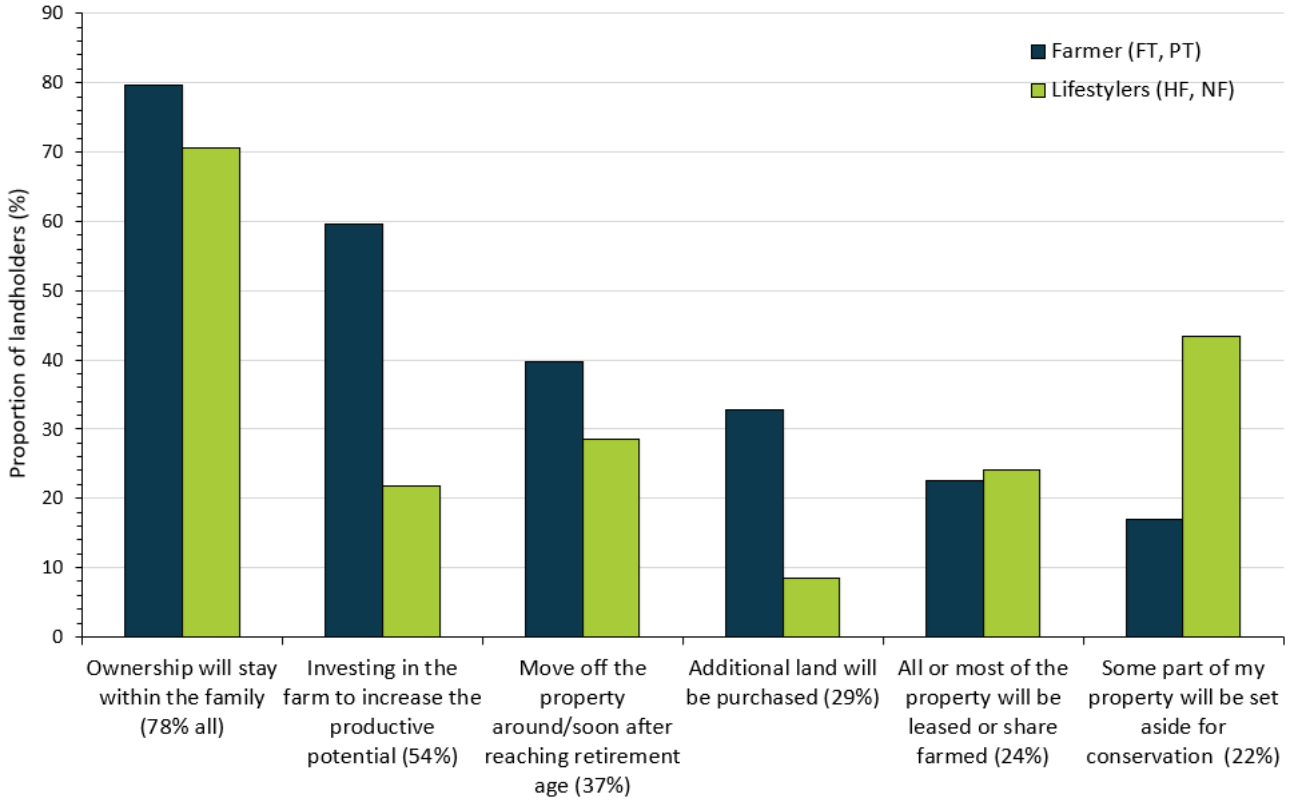

Figure 3. Top long-term property plans for farmers (full-time and part-time) and lifestylers (hobby farmers and non-farmers) for the 2024 Eyre Peninsula Landholder Survey (n=361-386). The proportion of landholders overall who agree with each statement is displayed in brackets.

Succession planning showed significant variation by landholder type. Farmers (both full and part time combined) reported the highest levels of family interest (80%) and were the most advanced in planning, with many having initiated or completed formal succession processes (Figure 4). Lifestylers (hobby and non-farmers) while still likely to keep the property in the family (71%), exhibited moderate engagement when discussing succession. These differences underscore the influence of landholder identity and property function on succession strategies and point to a need for tailored support systems to assist landholders at varying stages of readiness and with different long-term goals.

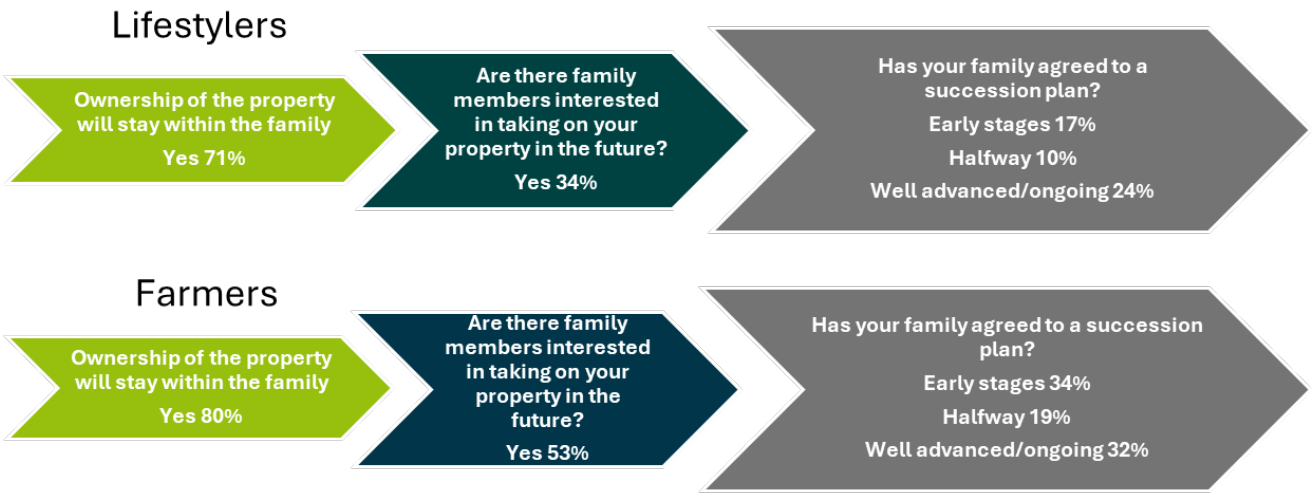

Figure 4. Views on whether the property will stay in the family and the proportion of landholders with succession plans underway for the 2024 Eyre Peninsula Landholder Survey (n=258-386).

Decision-making patterns on agricultural properties also varied notably by landholder type. While a significant proportion of all respondents (27%) reported managing their land mostly on their own, collaborative models were common among full-time farmers, especially through multi-generational involvement (50%). Hobby and part-time farmers were more likely to operate independently, reflecting smaller scale or lifestyle-oriented property use. The involvement of professionals, such as property managers or consultants, was more frequent among full-time landholders, aligning with the greater complexity and scale of their operations. These patterns illustrate the diversity of decision-making arrangements and the influence of operational scale, generational structure, and professional engagement on land management strategies.

1. INTRODUCTION

This report focuses on the development, implementation, and outcomes of a social benchmarking survey implemented on the Eyre Peninsula in 2024, which follows up on a Soil CRC rural landholder survey undertaken in the same region in 2020. This work is part of the 'Surveying On-Farm Practices' project, undertaking social benchmarking of rural landholders across Australia. The project is supported by funding from the Cooperative Research Centre for High Performance Soils (Soil CRC). This project is situated within Program 1 of the Soil CRC, which is focused on improving our understanding of social and economic factors driving decision-making and uptake of soil innovations, including levers for change.

Led by Associate Professor Hanabeth Luke of Murdoch University, the project commenced in 2019 to deliver regionally relevant landholder surveys in partnership with local farming and natural resource management (NRM) organisations across five Australian states. The project is designed to generate robust and accurate data that can inform and support improved knowledge-sharing and uptake of soil and land management practices for organisations supporting agriculture and land management from local to national scale. This is building a dataset of national importance, capturing both a breadth and depth of information related to on-farm decision-making among Australian landholders.

The survey gathers detailed information about actual and intended on-farm practices, alongside the challenges, goals, and aspirations of respondents. In addition, it collects contextual data concerning management styles, landholder values, self-assessed knowledge and confidence in recommended practices, and perceptions of agricultural risk. The systematic survey method undertaken builds on best-practice survey methods (Luke, 2025), including the foundational work of Professor Allan Curtis (Curtis & De Lacy, 1998). Murdoch University researchers partnered with Charles Sturt University, AIR EP and the South Australian Eyre Peninsula Landscape Board to develop and undertake the survey in the Eyre Peninsula.

1.1 CONCEPTUAL FRAMEWORK

The theoretical framework that underpins this study acknowledges the complexity of human behaviour and decision-making when it comes to land and farm management. Seeking to understand this complexity is critically important when aiming to influence rural land management practices. Many key factors shape landholder management practices, including governance structures, climatic conditions, property market trends, and demographic shifts, alongside farmers' perceptions of priority issues, their knowledge of best practices, and their roles as land stewards. As Lockwood (1999) points out, the absence of clearly understood causal relationships between these influencing factors reduces the likelihood of successfully encouraging changes in land management practices.

Values, beliefs, and personal norms—understood as socially accepted patterns of behaviour and decision-making—play a critical role in either reinforcing or moderating these influencing factors. However, shifting these deeply ingrained personal attributes is a long-term challenge (Lockwood, 1999). Nevertheless, engaging effectively with landholders requires an understanding of their values and beliefs. The Value-Belief-Norm (VBN) Theory provides a useful framework for exploring the links between values and behaviour, particularly in the context of environmental interactions and land management (Stern et al., 1999). McIntyre et al. (2008) distinguish between 'held' values—fundamental principles individuals consider important—and 'assigned' values, which reflect the significance landholders attribute to their land and farming operations. Additionally, value orientations, described by Axelrod (1994) as biospheric (environmentally focused), egoistic (focused on the self and what can be gained) and altruistic (focused on supporting others in society), influence decision-making by determining which held values take precedence. Individuals may simultaneously hold multiple, sometimes competing, value orientations (Lockwood, 1999; de Groot & Steg, 2008).

Developing effective strategies to promote the adoption of current recommended practices (CRP) and innovative approaches depends on identifying the most influential 'levers' for change. Lockwood (1999) highlights that landholders are unlikely to adopt new approaches, technologies, or practices if they are unaware of them or lack confidence in their effectiveness. Similarly, perceived high costs or excessive complexity may further deter adoption. Therefore, surveys should not only assess landholders' knowledge and confidence regarding best-practice land and farm management but also explore their sense of personal responsibility for land and soil stewardship. Curtis and Luke (2019) argue that an individual's willingness to take risks significantly affects their likelihood of adopting new practices, with more risk-tolerant individuals being more open to change.

Another essential aspect of engaging rural property owners is identifying effective approaches for extension services and information-sharing. Understanding how landholders perceive and trust local and regional organisations is crucial for fostering learning, dialogue, and action (Luke, 2017). Landholder typologies, such as those developed by Groth et al. (2014), offer valuable insights into how different priorities influence land management decisions. This study's questionnaire builds upon this typology, categorising respondents into full-time farmers, part-time farmers, hobby farmers, or non-farmers. This classification method has been validated in peer-reviewed research (Groth et al., 2014) and applied throughout all phases of the Soil CRC project (Curtis and Luke, 2019), demonstrating its effectiveness in tailoring strategies to facilitate practice change among diverse landholder groups.

1.2 SURVEY DEVELOPMENT

To ensure consistency and facilitate comparison across regions, a core set of questions related to general soil management principles and landholder demographics is retained in every iteration of the survey, with local workshops used to identify local topics of importance for building into the survey, and to inform reporting. The key topics and priorities relevant to the Eyre Peninsula were identified through a collaborative workshop

facilitated by Associate Professor Hanabeth Luke in partnership with AIR EP and staff of the Eyre Peninsula Landscape Board in November 2023 (Figure 5.). During the workshop, participants contributed to the development and refinement of critical topics and survey questions, drawing on insights from the previous regional survey. A comprehensive list of issues affecting farmers on the Eyre Peninsula was compiled, highlighting challenges such as landholder perspectives on climate change, supporting young farmers, shifts in land management and enterprise types, along with key factors influencing decision-making in natural resource management (NRM) and farming.

Figure 5: Refining the Eyre Peninsula Social Benchmarking Survey at Port Lincoln, for 2024 implementation.

This workshop identified several new key topics and questions in relation to decision-making about farms, land management and farming resilience, with a focus on provision of technical information in relation to soil health, profitability, emissions, biodiversity and adaptation strategies. The discussions explored the multifaceted roles of farmers as both business operators and land stewards, emphasising the balance between production objectives and sustainable soil and land management. Other key themes included managing uncertainty, farm planning, and succession strategies. Questions were raised about what drives farmers to change, to improve their soil health and build resilience over different timeframes, from income diversity to disaster response planning. Farmer attitudes towards regenerative agriculture, precision-farming and minimisation of inputs were important topics given elevated and fluctuating input costs. Also included was the perceived state of soil health and drivers of increased profitability and food quality. Soil testing regimes and how on-farm data were being used was raised as important.

It remained a priority to understand how landholders access information on critical issues such as climate change, financial planning, and soil management challenges, including water availability, salinity, erosion, soil biology, and regenerative practices. The group also examined strategies for engaging farmers effectively, identifying barriers to accessing and applying information.

The workshop's outcomes were synthesised into five priority areas:
A) The profile of farming on the Eyre Peninsula
B) The complexities of decision-making in land management
C) Challenges in land management
D) Strategies for engaging land managers
E) The future of farming in the region, including potential changes.

Some minor revisions were made to the survey following this workshop. Using these priorities, along with findings from surveys conducted in 2020, the project team refined the survey instrument. The survey included sections addressing key challenges faced by landholders, their values, practices, experiences, and knowledge of various issues, as well as their confidence in implementing best practices for soil, farm, and land management. A draft version of the survey was circulated to workshop participants for feedback and further refinement. Following revisions, the updated survey was piloted with local partners and a small group of rural landholders. The final questionnaire is provided in Appendix 2.

1.3 SURVEY ADMINISTRATION AND RESPONSE RATE

In mid-2024, prior to the launch of the survey, advance notifications were dispatched to all properties throughout the Eyre Peninsula exceeding 10 hectares. The identification of property addresses was facilitated by spatially referenced landholder data supplied by the Eyre Peninsula Landscape Board for the local government areas of Ceduna, Cleve, Elliston, Franklin Harbour, Kimba, Lower Eyre Peninsula, Port Lincoln, Streaky Bay, Tumby Bay, Whyalla and Wudinna.

A total of 1805 comprehensive survey booklets were sent out to all properties greater than 10 hectares on the Eyre Peninsula. This primary mailing effort was subsequently supported by two reminder notices, a second survey booklet and followed up with two thank you/reminder notices.

After considering undeliverable mail and instances where landholders opted out of participation, the final sample size for the survey was established at 1,462 landholders. Ultimately, a total of 371 surveys were returned in booklet format, augmented by an additional 61 responses submitted online, resulting in an overall response rate of 30%. In total, 432 surveys were collected and analysed (Table 3.).

Table 3. The distribution of landholder responses by local government area for the 2024 Eyre Peninsula Landholder Survey (n=432).

LGA	Count	Percent
Ceduna	38	9
Cleve	57	13
Elliston	32	7
Franklin Harbour	35	8
Kimba	30	7
Lower Eyre Peninsula	93	22
Port Lincoln	1	0
Streaky Bay	42	10

Tumby Bay	57	13
Whyalla	1	0
Wudinna	39	9
Non identified	7	2
Total	432	100

1.4 DATA ANALYSIS

We utilised three main methods to analyse the data: descriptive statistics, statistical tests for significant relationships, and correlation analyses through linear regression modelling. Descriptive statistics, including frequencies, means, and medians, were applied to summarise survey responses, excluding "not applicable" and missing responses from the means calculations. Further analysis focused on identifying statistically significant differences among landholder groups (full-time farmers, part-time farmers, hobby farmers, and non-farmers) and generational cohorts, which were Baby Boomers and older (referred to as Baby Boomer+), which is for those born in and before 1964 (brought together with all older landholders due to low n numbers for the Silent Generation), Generation X (1965-1980), and Generation Y and younger (referred to as Gen Y-) for those born from 1981 and onwards, coupled due to low n numbers for Gen Z landholders.

To evaluate group differences, Kruskal-Wallis rank sum tests were used for continuous or Likert scale variables (e.g. age or agreement levels), with grouping variables such as farmer identity. Likert scale responses were condensed into two categories (1–2 and 4–5) for reporting percentage agreements. For nominal data, such as Yes/No responses (e.g. Landcare participation), Pearson's chi-squared test with simulated values was employed to detect differences across groups. Chi-squared goodness-of-fit tests were used to assess dependencies between grouping variables. Pairwise comparisons explored positive and negative relationships between variables that might influence the adoption of best-practice management practices related to agriculture and natural resource management. Respondents could select "Don't know/Not applicable" for relevant questions, with the proportion of such responses varying across items.

Statistical significance was determined at a p-value threshold of 0.05, indicating a less than 5% likelihood of the observed relationship or difference occurring by chance. Analyses were conducted using R statistical software and Microsoft Excel.

Logistic regression modelling was then applied to assess how selected independent variables contributed to the likelihood of best-practice implementation. Pairwise comparisons were carefully reviewed to exclude irrelevant or nonsensical statistically significant relationships, narrowing the analysis to approximately 30 independent variables for input into a modelling program which can identify a group of variables that together influence best-practice management decisions. Only models achieving an accuracy above 70% were considered. Variables were ranked using the Akaike Information Criterion (AIC), with models exhibiting multicollinearity flagged for further evaluation. While excluding multicollinear variables reduces redundancy (e.g. when two variables have similar effects), it may also omit conceptually important factors. For

example, if both participation in a soil health group and property size show a meaningful relationship with best-practice implementation but are correlated, regression modelling may exclude one variable, potentially overlooking key insights. Although advanced statistical techniques could better address causality, such methods are beyond the scope of this research.

The following sections present the survey results and their implications.

2. A PROFILE OF FARMING ON THE EYRE PENINSULA

2.1 AN AGRICULTURAL LANDSCAPE

The distribution of landholder types on the Eyre Peninsula has shown notable shifts between the 2020 and 2024 survey years (Figure 6.). The proportion of full-time farmers increased from 62% in 2020 to 65% in 2024, indicating a slight rise in the number of individuals fully engaged in farming. Part-time farmers also saw a modest increase, growing from 14% to 16% over the same period. In contrast, the proportion of hobby farmers declined from 8% to 6%, suggesting a slight reduction in those engaging in small-scale or recreational farming. Similarly, the percentage of non-farmers decreased from 16% to 13%, reflecting a possible shift in land use or ownership patterns, which could also be due to the margin of error between different respondents completing the survey in the two different periods. These trends, based on a sample size of 402 respondents in 2024, highlight slow changes to landholder typologies across the region.

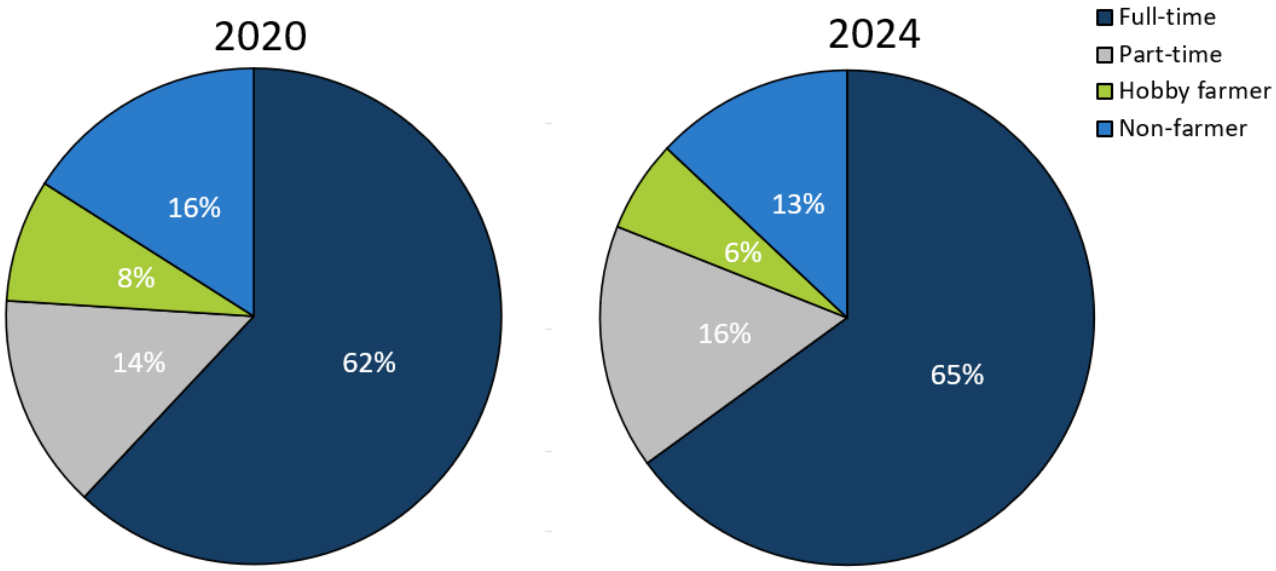

Figure 6. Proportion of landholder types on the Eyre Peninsula identified in the 2020 (n=435) and 2024 (n=402) Landholder Surveys.

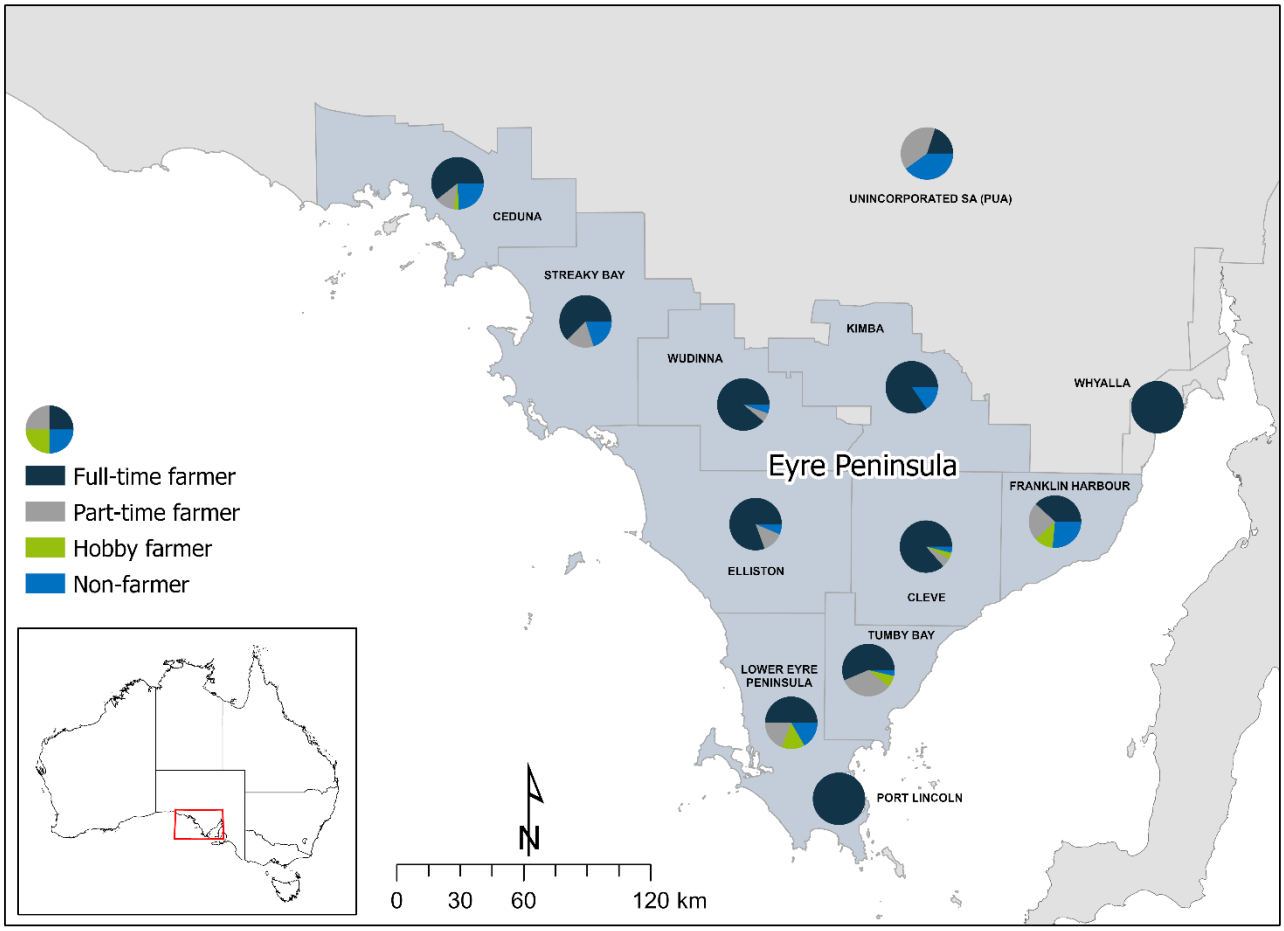

Figure 7. The distribution of landholder categories by local government area identified in the 2024 Eyre Peninsula Landholder Survey (n=432). (Simon McDonald)

The survey results revealed that land use and enterprise choices varied significantly amongst different types of landholders, with full-time farmers being engaged in a broader range of agricultural enterprises compared to part-time, hobby, and non-farmers (Figure 8). Cereals and sheep dominated across all groups, particularly amongst full-time farmers, with 95% involved in cereal production and 82% in sheep enterprises. Pasture use also showed a marked presence, particularly amongst full-time farmers (70%), but declined substantially amongst hobby farmers (25%) and non-farmers (14%). Legume and pulse production followed a similar pattern, with a steep drop-off from full-time farmers (57%) to hobby farmers (4%).

In contrast, non-agricultural and conservation-related land uses were more prevalent amongst hobby farmers and non-farmers. Areas set aside for living and recreation were most common among non-farmers (37%) and hobby farmers (29%), suggesting lifestyle motivations play a key role for these groups. Tree planting for purposes such as shelter or erosion control was also more common among hobby farmers (29%) compared to full-time farmers (23%). Notably, minor enterprises such as beekeeping, other commercial livestock (e.g. goats, alpacas), and tourism-related activities showed low uptake across all landholder types, although hobby and part-time farmers reported slightly higher participation in these niche activities. These trends underscore the diversity of land use

motivations and capacities across the farming spectrum, from commercial production to lifestyle and conservation interests.

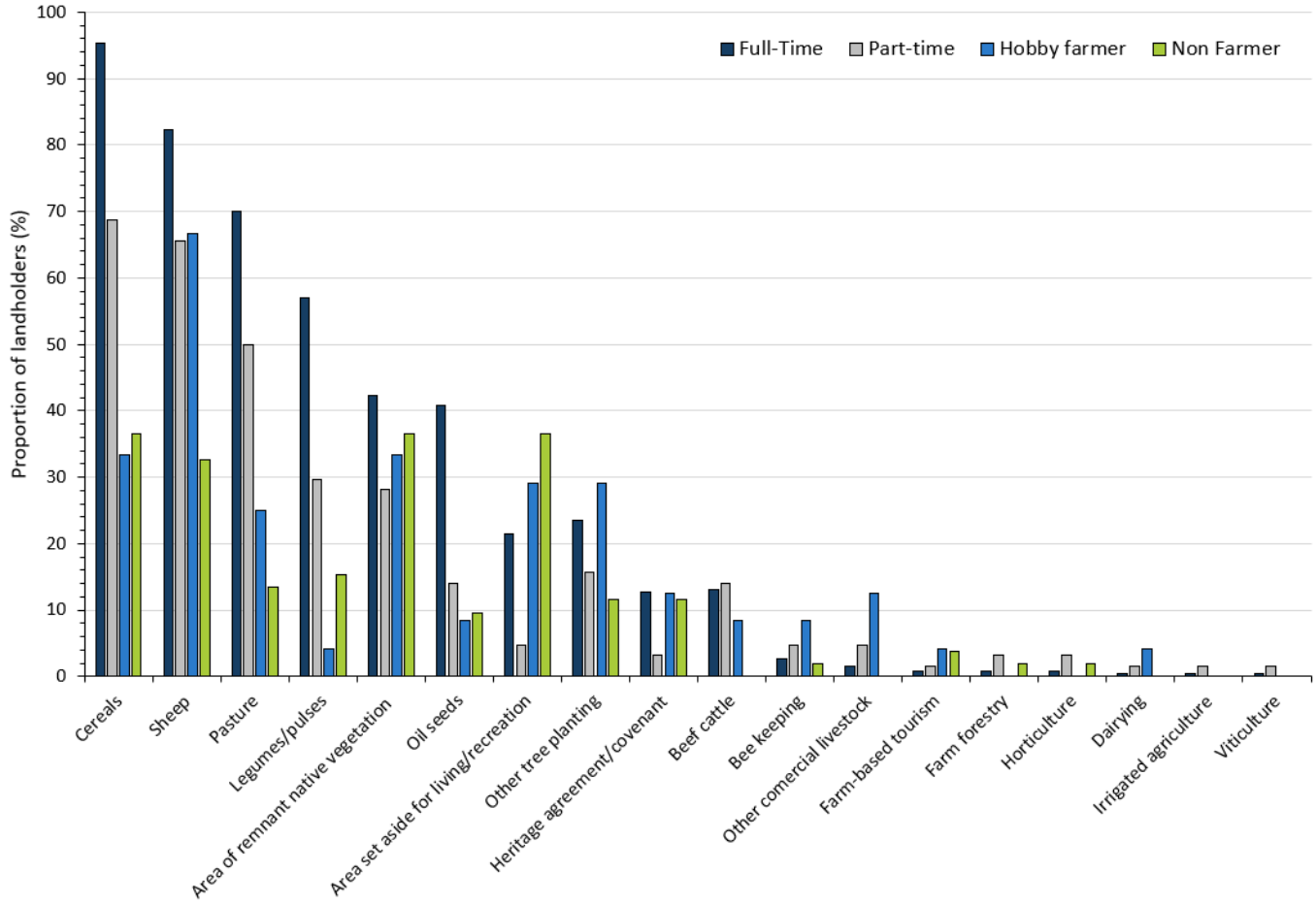

Figure 8. Land use on the Eyre Peninsula by landholder type. Percentages show the proportion of landholders undertaking each activity at the time of the 2024 Landholder Survey (n=432).

2.2 FARM MANAGEMENT

2.2.1 Key demographics and attributes

The demographic characteristics of full-time and part-time farmers on the Eyre Peninsula in 2024 illustrated notable differences in land ownership, labour input, and agricultural engagement (Table 4.). In contrast, hobby farmers and non-farmers exhibited very different landholding and engagement profiles, underscoring their limited involvement in commercial agriculture.

Full-time farmers on the Eyre Peninsula:

Full-time farmers were, on average, the youngest landholder group at 56 years, with 88% residing on their property and the highest rate of land expansion (70% had purchased additional land in the past 20 years). They also managed the largest properties, averaging 3,382 ha owned and 1,136 ha leased, or share farmed. These landholders worked the most hours on-property (55 hours/week) and had the lowest reliance on supplementary income, with only 7% earning off-property income. Moreover, 92% of full-time farmers earned income from their Eyre Peninsula property, and 83% reported earning over

$50,000 in net profit last year. They were also the most engaged in professional development, with 19% having completed relevant short courses and 78% having attended a soil health or productivity field day in the past year.

Part-time farmers on the Eyre Peninsula:

Part-time farmers owned smaller properties on average (1,323 ha), leased out substantial areas (828 ha), and leased in comparatively little areas (51 ha). They were less likely to reside on their property (59%) and worked fewer hours on-property (29 hours/week) but had higher levels of paid off-property work (139 days/year). Despite reduced on-farm involvement compared to full-time farmers, 85% still reported agricultural income, though only 59% earned more than $50,000 in profit. Educational engagement was modest, with 14% having completed short courses and 49% having attended a field day. Family involvement on-farm was also lower (45%), and 37% had a farm management plan in place. These attributes suggest part-time farmers maintain significant ties to agricultural production while relying on off-farm income and operating at a reduced intensity compared to full-time counterparts.

Hobby farmers on the Eyre Peninsula:

Hobby farmers averaged 60 years of age and owned smaller holdings (199 ha), with relatively low rates of land purchase (5%) and subdivision (14%). They worked an average of 13 hours/week on-property and had substantial off-farm commitments (238 paid workdays/year). Only 26% reported earning income from their property, and just 22% earned over $50,000 in profit. Educational and extension engagement was minimal—15% had completed a relevant course and only 30% attended a field day. Family involvement in on-farm work was limited (32%), and only 9% had a farm or property management plan.

Non-farmers on the Eyre Peninsula:

Non-farmers were the oldest group on average (63 years) and least likely to reside on their properties (43%). They owned a surprising 1,587 ha on average, primarily from inheritance or legacy holdings, yet only 26% derived income from their land and just 28% reported substantial profit. Despite leasing out a significant area (615 ha), they had minimal direct on-farm involvement (8 hours/week) and high off-property commitments (140 paid workdays/year). Educational participation was the lowest among all groups, with only 7% having completed courses and 12% having attended a field day. Only 17% had any form of property management plan in place. These data suggest that while non-farmers may hold large land parcels, their operational engagement and agricultural productivity are minimal, indicating a passive or lifestyle-oriented relationship to the land.

Table 4. Key attributes summary table by landholder type for the 2024 Eyre Peninsula Landholder Survey (n=267-413) and comparing overall responses for the 2020 (n=231-461) and 2024 survey years.

Key attributes	Overall (2020)	Overall (2024)	Full-time (2020)	Full-time (2024)	Part-time (2024)	Hobby Farmer (2024)	Non-Farmer (2024)
Mean age of respondent	57 yrs	58 yrs	54 yrs	56 yrs	60 yrs	60 yrs	63yrs
% Female respondent	10%	7%	5%	4%	5%	21%	17%
Resident on property	76%	74%	91%	88%	59%	67%	43%
Mean area owned in region	2885 ha	2584ha	3709ha	3382ha	1323ha	199ha	1587ha
Bought additional land in region in past 20yrs (%Yes)	51%	54%	70%	70%	46%	5%	14%
Subdivided or sold part of property in past 20 yrs (%Yes)	16%	21%	17%	20%	22%	14%	27%
Mean area of property leased, share farmed or agisted by others	359ha	370ha	302ha	142ha	828ha	21ha	615ha
Mean area of additional land that you manage (lease/share farm etc)	669ha	1070ha	910ha	1136ha	51ha	6671ha	40ha
Mean length of family ownership	68 yrs	62 yrs	83 yrs	66 yrs	48 yrs	31 yrs	75 yrs
Other family members working on the property (%Yes)	59%	63%	79%	80%	45%	32%	14%
Mean paid off-property work in the last 12 months	87 days	67 days	37 days	20 days	139 days	238 days	140 days
Hours work on-property per week	42hrs	43hrs	53hrs	55hrs	29hrs	13hrs	8hrs

Earned income from agriculture on EP property (last financial year) (%Yes)	78%	79%	93%	92%	85%	26%	26%
Earned net profit from EP property (last financial year)	69%	69%	76%	83%	59%	22%	28%
Received off-property income in the last financial year (%Yes)	34% me, 22% partner	15% me, 26% partner	22% me, 30% partner	7% me, 31% partner	24% me, 22% partner	45% me, 10% partner	30% me, 15% partner
Attended soil health/productivity field day in last 12 months (%Yes)	53%	63%	66%	78%	49%	30%	12%
Property management or whole farm plan underway or completed (%Yes)	44%	41%	53%	52%	37%	9%	17%

2.3 LANDHOLDER GOALS

When asked the open-ended question 'Could you please outline your main goals in relation to your property/farm?' the goals discussed reflected a deep commitment to stewardship, sustainability, and succession (Figure 9.). A consistent theme was the desire to "leave the land in better condition than when it was taken over", encompassing improvements in soil health, biodiversity, infrastructure, and ecological resilience. Many landholders expressed a clear ambition to enhance the productive capacity of their farms while maintaining or restoring the natural environment. This included revegetation with native species, fostering habitat for native fauna, and reducing chemical inputs to support a healthier landscape. Several respondents also noted the importance of adopting regenerative practices and mitigating challenges such as drought, salinity, and weed invasion.

In addition to environmental and agronomic goals, there was a strong emphasis on financial viability and family continuity. Farmers frequently referred to the farm as a multigenerational legacy, aiming to "pass it on to the next generation in a better, healthier, and more sustainable position". For many, profitability was seen as intertwined with sustainability, providing a stable income and supporting retirement plans while ensuring the enterprise remained attractive and feasible for future generations. The farm was not only seen as a business but a home and a way of life, valued for its capacity to support family, instil pride, and offer a meaningful connection to land and nature. This blend of economic, ecological, and familial goals illustrates a holistic vision for land management grounded in long-term resilience and care.

Figure 9. Word cloud representation of landholder responses to the question: 'Could you please outline/list your main goal/s in relation to your property/farm?' from the 2024 Eyre Peninsula Landholder Survey (N=435). Each word is emphasised in relation to the number of responses. Source: wordclouds.com

Farmer goals and values

Farmers, both full-time and part-time, prioritised the long-term sustainability and productivity of their land. Measured values closely linked with landholder goals, with the survey identifying that 93% of all landholders emphasised the importance of passing on a healthier environment to future generations (Table 6.). This strong environmental stewardship aligned with their commitment to maintaining a high-quality food production system, as 91% considered a healthy landscape that produces superior food to be important or very important. Farmers sense of accomplishment was deeply tied to their ability to sustain a viable business, with 93% having valued the achievement of building and maintaining a successful farming enterprise. Additionally, economic security played a crucial role in farmer goals, with 88% considering their property as an important source of household income, and 84% having identified it as a key asset in family wealth. These factors highlight how farmers integrate financial stability with their broader land management objectives, ensuring that their agricultural operations remain both profitable and sustainable for future generations.

Beyond financial and environmental considerations, farmers also expressed a strong personal and emotional connection to their land. Their property was not just seen as a place of work but also a fundamental part of their identity and community ties. For instance, 81% saw their property as an important part of who they are, while 77% felt it provided them with a sense of belonging to a community. Similarly, 82% attached importance to the productive value of their soil, emphasising their role as stewards of the land. The broader meaning of their work was also evident in their appreciation of producing food and fibre for others (82%) and their desire to be part of positive change in farming (74%). Additionally, many farmers viewed their land as a long-term investment, with 69% seeing it as an asset that will help fund their retirement. These values collectively illustrate that, for farmers, land management is not just a profession but an integral part of their personal, social, and financial aspirations.

Lifestyler goals and values

Lifestylers, including hobby farmers and non-farming landholders, tended to place less emphasis on economic and production-related aspects of land ownership, and instead prioritised lifestyle, environmental, and recreational values. While 84% still recognised the importance of passing on a healthier environment to future generations, 61% considered maintaining a healthy landscape for high-quality food production as a major priority. Financially, land ownership was seen as less critical, with 39% viewing their property as an important source of household income, compared to 88% of farmers. Similarly, 43% valued their properties for the sense of accomplishment associated with maintaining a viable business, reinforcing the idea that their properties are not primarily seen as working enterprises. However, financial considerations remained relevant, with 56% acknowledging their property as an asset for retirement and 52% viewing it as part of their family wealth, albeit to a lesser extent than farmers.

Rather than focusing on agricultural productivity, lifestylers placed a higher value on the aesthetic, recreational, and ecological aspects of their land. A significant 79% considered their property's attractiveness an important factor, and 76% appreciated the presence of

native plants and animals, reflecting a strong interest in conservation and biodiversity. Recreation was also a key goal, given 67% viewed their property as a place for leisure activities. While personal identity and belonging remained important, they were valued differently than amongst farmers. While 56% considered their property an integral part of who they are, just 48% linked it to a sense of community belonging. Additionally, opportunities for learning new things (60%) and contributing to environmental stewardship rather than production-based goals highlighted their broader interests. Overall, lifestylers viewed their properties as investments, emphasising environmental appreciation, personal enjoyment, and quality of life over agricultural or business objectives.

2.4. LANDHOLDER VALUES

Two ways of understanding what landholders value, and their value-orientation, are presented in this report. The first are guiding life principles, which we propose to be a proxy for landholder value-orientation. Egoistic, altruistic, and biospheric value orientations reflect differing motivations for undertaking behaviours associated with land management. Egoistic values prioritise personal benefits (e.g. health, finances), altruistic values emphasise the welfare of other people, and biospheric values focus on the intrinsic worth of nature and non-human species (de Groot & Steg, 2008).

What we identified through the inclusion in the survey of four life principles of wealth creation, environmental care, social-care and power to influence, was that creating wealth and living in harmony with nature were the two dominating value-orientations, with caring for others being the third. Being influential was important for just under a third of landholders in 2024, whereas wealth creation was important for just over three-quarters of landholders (Table 5.). These have been identified as important in much of the regression modelling, including for things like agricultural or NRM practice implementation, succession and landholder wellbeing, and show little change over time.

Table 5. Principles that guide life by landholder type for the 2024 Eyre Peninsula Landholder Survey (n=397-398) and overall, for the 2020 (n=458-464) survey. Means (out of 5) are given in brackets and percentages reflect the proportion of landholders that indicate important or very important for each statement. Orange shading highlights the top three values by percentage, with the darkest shade reflecting the most important principle.

Principles that guide your life	% Important / very important					
	Overall mean (2020)	Overall mean (2024)	Full-time (2024)	Part-time (2024)	Hobby Farmer (2024)	Non-Farmer (2024)
Creating wealth and striving for a financially profitable business	77% (4.1)	76% (4.0)	87%	73%	35%	48%
Respecting the earth and living in harmony with nature	74% (4.0)	71% (3.9)	65%	67%	96%	91%
[1]Caring for vulnerable people and correcting social injustice	57% (3.6)	58% (3.6)	53%	64%	74%	57%
Being influential and having an impact on people and events	37% (3.1)	32% (2.9)	36%	30%	17%	29%

[1] Question not included in both surveys or slight difference in wording between survey years - see appendix table X11

Biospheric values

Biospheric values, which reflect environmental and ecological priorities attached to their properties, showed a general increase in importance between the 2020 and 2024 surveys (Table 6.). While 'respecting the earth and living in harmony with nature' remained a strong guiding life principle, its overall importance declined slightly from 74% in 2020 to 71% in 2024. However, within different landholder groups, significant variation was observed. Hobby farmers (96%) and non-farmers (91%) exhibited the highest commitment to environmental values, while full-time (65%) and part-time farmers (67%) were less likely to prioritise this value. Additionally, caring for others remained relatively stable in importance (58% in 2024 vs 57% in 2020). Lifestylers, being part-time farmers (64%), and hobby farmers (74%), were most likely to emphasise social justice.

A regression model of reasonable strength showed that several important factors were linked with the life principle of 'respecting the earth and living in harmony with nature'. These factors were: being of a view that climate change is anthropogenically driven; concerned about impacts of neighbouring landholders; and more likely to be reducing synthetic inputs on their properties. Landholders who placed strong importance in this life principle were more likely to view their property as important habitat for birds and animals, with a sound level of knowledge about the role of remnant vegetation in supporting landscape health ($R2=0.36$).

From the pairwise comparisons, the top five survey components that this life principle linked with were:

1. Care for others and correcting social injustice.
2. Care for native flora and fauna as a value attached to their properties as well as concerns about their loss. Other property-related values were a sense of identity, belonging and wanting to pass on a healthier environment for future generations.
3. Being interested in learning more about regenerative/holistic farming and viewing their property as an opportunity for learning.
4. Concern about anthropogenic climate change.
5. Understanding the role of remnant vegetation/understory plants in supporting the natural ecosystem.

Other key associations were a belief in science; concern about changing and extreme weather; concern about declining soil health; a desire to be influential.

Women were more likely to have this as a driving principle (Female=4.3/5: Male=3.9/5), and there was a high positive correlation with having a completed succession-plan. This guiding principle had a notable difference by generation, with the importance of this life principle increasing with age, having a notable difference between the generations (BB+=4.1/5; X=3.9/5; Y-=3.6/5). It was also much more important as a driving life-principle for non-farmers than farmers (Farmers = 3.8/5; non-farmers = 4.4/5). These figures were the same for non-farmers and hobby farmers (hobby = 4.43; non-farmer=4.43), and similar between part-time and full-time farmers (full-time farmer=3.81; part-time farmer=3.89).

These figures underpin our decision to frame our reporting using the farming and lifestyler categories.

Crucially, landholders aligning with biospheric values were less likely to have heard of the existence of AIR EP, likely because it is oriented to serving the farming community (Not heard=4.1 Yes, have heard of them=3.8). This item correlated significantly with the implementation of the following land/farming practices: Regenerative or organic farming, sowing perennial pastures, planting legumes, planting trees and intended precision-farming, including preparing a nutrient budget (10 of 33 practices). No-till and strip 'n' disc farming systems correlated significantly as a past, but not current, practice.

Information sources important to this grouping were environmental groups, the landscape board, local councils, PIRSA and universities. Information modes were books and scientific journal articles. The negative correlations were notable, being with independent or commercial consultants; field days; friends/family; Twitter/X; WhatsApp; other farmers and the news.

Between the 2020 and 2024 surveys, the strongest shift was observed in the value placed on passing on a healthier environment for future generations, rising from 87% in 2020 to 93% in 2024 for all landholders. This increase suggests a growing awareness and commitment to sustainability and regeneration of land. Similarly, maintaining a healthy landscape for high-quality food production was rated as important or very important by 86% of respondents in 2024, though no comparable data was available for 2020. The importance of having an attractive place to live increased slightly from 80% to 82%, while the sense of belonging associated with land ownership, measured for the first time in 2024, was valued by 76% of respondents. Additionally, concerns for biodiversity and habitat preservation remained steady or grew modestly, with the importance of native vegetation as a habitat for birds and animals rising from 68% to 72%. However, the value placed on native plants and animals making a property an attractive place to live remained unchanged at 65%. These trends suggest a strengthening environmental ethic among landholders, with an increasing emphasis on sustainability, aesthetics, and ecological stewardship.

Egoistic values

Egoistic values, which relate to financial security, business success, and personal achievement, generally saw slight increases between 2020 and 2024. The life principle of 'creating wealth and striving for a financially profitable business' remained a high priority among landholders, with 76% of respondents rating it as important or very important in 2024, a slight decline from 77% in 2020 (Table 6.). However, there were notable differences across landholder types. Full-time farmers placed the highest importance on financial success, with 87% prioritising it, reflecting their dependence on agriculture as a primary income source. Part-time farmers also valued financial profitability, though to a lesser degree (73%), as they may supplement their income through other employment. In contrast, hobby farmers (35%) and non-farmers (48%) were significantly less motivated by financial success, likely because their properties are not their main source of income. These findings highlight how landholder goals vary based on their level of economic reliance on agriculture.

A medium strength regression model showed that the important factors linked with the life principle to build wealth, were; knowledge of how to build soil carbon and allocate land according to land class; concern about the social license for farming in their region and increasing their use of synthetic inputs (R2=0.27).

From the pairwise comparisons, the top five survey components that this life principle linked with were:

1. Values associated with their property, including economic values such as a sense of accomplishment from building/maintaining a viable business income and asset. Also, the productive value of soil on their property; having a sense of accomplishment from producing food and fibre for others; producing quality food; being a part of positive change in farming, and their property being a great place to raise a family. It strongly co-correlated with a driving principle to be influential.
2. The second most important element of this life principle was salient issues (27 of the 33 issues listed). The strongest links were with concerns about phosphorus availability in soils; a lack of skilled labour in the region; and uncertainty of returns limiting capacity to reinvest combined with rising input costs. Of the 28 issues listed, 15 were soil related, six were climate related and six were social issues, including absence of services, land-use conflict and social license to operate.
3. Knowledge about how to use soil-test results, identify and treat constraints, allocate land according to land class, and plant legumes. In all, 16 knowledge-items correlated with this life principle. A broad range of information sources (18) were positively correlated.
4. Landholders with wealth creation as a driving life principle were likely to be testing soils regularly. This life principle correlated significantly with 15 out of 33 'best-practices' for farming and land management, which included having a whole-farm plan in place; no-till farming, strip 'n' disc, time-controlled grazing, maintaining 70% groundcover; integrated pest management (IPM); liming; planting perennial pastures; planting legumes; organic farming; good waste-management; precision-farming; testing soils; creating a nutrient budget; and using a soil-moisture probe.
5. Management/attitudinal factors such as having good systems in place to manage farm data, viewing themselves as early adopters, applying data-driven decision-making, and having confidence with managing the farm in the face of uncertainty (p=0.0017) were key elements for farmers. Social norms about the importance of grower groups and being involved were also strong.

There were a high number of significantly correlated items for this life principle, when compared to the other three (total 156 items). Being a farmer was important for those with wealth as a driving principle, with scores of 4.2/5, against 3.2/5 for lifestylers. This slipped across a gradient between full time farmers (4.2/5), part-time farmers (4/5), hobby farmer (3.2/5) and non-farmers (3.1/5). Wealth as a guiding principle linked with having a larger property and/or more properties. Other important associations not listed above were having an advanced succession-plan in place, with the family working on the farm. Also, bringing in income from farming and turning a profit; having changed their practices due

to changes in weather patterns. This life principle correlated positively with sharing decision-making with others, especially with multiple generations of the family.

The 16 correlated knowledge-items related mostly to soil health, monitoring and management (8 items), and how to grow nutrient-dense food, use time-controlled grazing and knowledge of technologies such as virtual fencing and soil-moisture probes, and emerging carbon and biodiversity markets. Of the 18 correlated information sources, the most important sources were other farmers, followed by AIR EP and independent agronomists and other rural R&D organisations. Commercial consultants were also highly important. The most popular modes of accessing information were via field days, short courses and brochures, likely the EP Farming Systems Summary, which is produced by local R&D organisations. Farmers with wealth creation as a driving principle had a high level of trust in their local grower group, AIR EP, and confidence in their capacity to drive R&D that meets the needs of farmers. They were likely to feel supported, generally satisfied with productivity and have a high level of confidence in several best-practices such as soil-testing, lime application and subsoil modification. They were, however, more likely to be increasing their inputs per hectare. In terms of environmental considerations, concern about the loss of native flora and fauna in the landscape was negatively correlated with wealth creation as a driving principle, as was the consideration that climate change is anthropogenic.

There were slight changes over time. The sense of accomplishment from maintaining a viable business grew from 82% to 84% in 2024, while the importance of a property as a source of household income rose from 76% to 79% in 2024. However, the perceived importance of soil productivity declined slightly from 79% in 2020 to 76% in 2024, as did the sense of accomplishment from producing food and fibre for others, which fell marginally from 76% to 75%. The importance of contributing to positive change in farming, measured for the first time in 2024, was valued at 69%, indicating a moderate but meaningful recognition of innovation and progress in agriculture. Meanwhile, the importance of land as an asset for retirement increased slightly from 65% to 67%, and the value placed on recreation saw a small rise from 52% to 54%. These trends suggest that while financial and business-related motivations remain strong, there is a subtle shift toward a broader understanding of land value, incorporating aspects of long-term sustainability and social contribution.

The desire to be 'influential and impact people and events' was the least valued life principle, and it also appeared to decline, with importance dropping from 37% in 2020 to 32% in 2024. Full-time farmers (36%) placed slightly more emphasis on influence, likely due to their role in shaping agricultural practices and local economies. However, part-time farmers (30%) and non-farmers (29%) expressed lower interest in personal influence, and hobby farmers (17%) showed the least concern for having an impact on people and events. This suggests that while economic and environmental values remain significant, personal recognition and influence are not primary motivators for most landholders. Instead, many appear to prioritise practical and ethical considerations, such as financial stability, environmental stewardship, and social responsibility, over personal prestige or power.

A reasonable strength model showed that important factors linked with having the power to influence others were: viewing their property as an opportunity for learning; being concerned about soil erosion and unintended consequences of previous amelioration strategies; and that fundamental changes were required to make farming systems in their region resilient (R2=0.32).

Altruistic values

Altruistic values, which reflect social and family-oriented priorities, showed mixed trends over time. Caring for others changed little over time, rising by one percent to being important for 58% of landholders. It was most important for hobby farmers, at 74%, and least important for full-time farmers, at 53%. A medium strength regression model showed that important factors linked with the life principle to care for others and strive for fairness, were: care about plants and animals on their land; being open to new ideas about farming; be of a view that climate change is anthropogenically driven; concerned about acidic soils; and have completed year 12 (R2=0.23).

The importance of having a great place to raise a family saw a slight decline from 84% in 2020 to 82% in 2024, though it remained a highly valued aspect of land ownership. In contrast, the significance of property as a core part of personal identity, measured for the first time in this region in 2024, was affirmed by 74% of respondents. A notable increase was seen in the importance of land in fostering a sense of community belonging, which rose from 66% to 72%, highlighting a growing appreciation for social connections tied to land ownership. The value placed on opportunities for learning new things remained steady at 71%, indicating consistent interest in education and skill development related to land management. Overall, these findings suggest that while family-oriented motivations remain strong, there is an increasing recognition of the social and personal identity aspects of land ownership, with more landholders seeing their properties as integral to their sense of belonging and community engagement.

In the pairwise comparisons, 'caring for others and seeking to correct social injustice' showed the following patterns of significant relationships:

1. The strongest association was with other values, including the life principle of caring for the earth, as well as the value of their property as habitat for birds and animals. A sense of belonging to a community was also important, as was the beauty of their land, and having the ability to pass on a healthier environment to future generations.
2. There were a high number (25/34) of issues that correlated significantly with caring for others. All soil issues were significant for this group (13/13), with topsoil issues being herbicide residue and unintended impacts of previous amelioration strategies, pH (sodicity or acidity) and low soil carbon. Environmental issues on the property and in the region were also highly correlated, including water security, fire, flood, and loss of native flora and fauna. All social issues were also significant, including the impacts of neighbouring landholders (overspray, etc); the impact of absentee landholders; sufficient rural services; and the level of support for new and young farmers.

3. The third association was an attitudinal factor, being open to new ideas about farming and land management and seeing their property as a learning opportunity.
4. The fourth was having time and financial capacity to be able to do things they want to on the farm.
5. The fifth was having confidence in regenerative agriculture alongside understanding human impacts on climate, found to be tightly linked in our previous studies (Alexanderson et al., 2023).

Other associations that emerged from the pairwise were that likelihood to hold this value increased with age (but was not affected by gender). Important information sources for this group were the Landscape Board, PIRSA and Landcare. Interestingly, this item did not correlate with having implemented *any* agricultural or land management practices. It related to four knowledge-items, with the most strongly correlated being how to grow nutrient-dense food, and three on soil-health.

Table 6. Attached values (also referred to as 'assigned values') by landholder type and overall, for the 2020 (n=450-463) and 2024 surveys (n=328-383). Means (out of 5) are given in brackets and percentages reflect the proportion of landholders that indicated important or very important for each statement. Orange shading highlights the top three values by percentage, with the darkest shade reflecting the most important value.

Attached values: Why your property is important to you?	% Important / very important					
	Overall (2020)	Overall (2024)	Full-time (2024)	Part-time (2024)	Hobby Farmer (2024)	Non-Farmer (2024)
BIOSPHERIC						
[1]Ability to pass on a healthier environment for future generations	87% (4.3)	93% (4.4)	96%	93%	95%	79%
[1]Having a healthy landscape that grows food of the highest quality	NA	86% (4.1)	93%	82%	85%	49%
An attractive place/area to live	80% (4.1)	82% (4.1)	86%	69%	90%	74%
[1]Provides sense of belonging to a place	NA	76% (4.0)	84%	66%	48%	57%
Its native vegetation provides habitat for birds and animals	68% (3.9)	72% (3.9)	71%	66%	81%	79%
[1]Native plants and animals make the property an attractive place to live	65% (3.8)	65% (3.8)	63%	57%	68%	80%
EGOISTIC						
Sense of accomplishment from building/maintaining a viable business	82% (4.1)	84% (4.2)	93%	90%	45%	42%
An important source of household income	76% (4.0)	79% (4.0)	94%	66%	38%	40%
An asset that is an important part of family wealth	78% (4.1)	79% (4.1)	88%	72%	57%	50%
The productive value of the soil on my property	79% (4.0)	76% (4.0)	86%	67%	50%	40%

Sense of accomplishment from producing food and fibre for others	76% (3.9)	75% (3.9)	84%	74%	62%	39%
[1]Sense of accomplishment from being a part of a positive change in farming	NA	69% (3.8)	77%	60%	44%	43%
An asset that will fund my retirement	65% (3.8)	67% (3.8)	72%	58%	45%	62%
A place or base for recreation	52% (3.5)	54% (3.5)	52%	49%	82%	59%
ALTRUISTIC						
A great place to raise a family	84% (4.2)	82% (4.1)	91%	72%	76%	58%
[1]My property is an important part of who I am	NA	74% (4.0)	81%	69%	52%	57%
Provide a sense of belonging to a community	66% (3.8)	72% (3.9)	80%	67%	43%	51%
Provide opportunities to learn new things	71% (3.9)	71% (3.9)	76%	65%	62%	59%

[1] Question not included in both surveys or slight difference in wording between survey years - see appendix table X11

3. COMPLEX DECISIONS IN FARMING & LAND MANAGEMENT

3.1 LAND MANAGEMENT PRACTICES

The survey data on management practices recently implemented (over the previous four years) indicated a strong emphasis among farmers, particularly the farmer group (made up of full-time and part-time farmers), on soil health, input management, and sustainable land use (Figure 10.). Among the most widely adopted practices were minimum or no-tillage techniques, reported by 66% of farmers, and the preparation of fertiliser budgets or plans, implemented by 61% of this group. These practices reflect an ongoing shift toward efficient nutrient management and soil conservation, likely driven by economic pressures such as rising input costs and uncertain returns. Similarly, soil testing to understand soil condition was undertaken by 55% of farmers, underscoring a science-based approach to improving productivity and sustainability.

Another widely reported practice was the planting of legumes, including lucerne, clover, medics, and pulses, by 55% of farmers. This reflects both soil fertility and pasture improvement objectives, as legumes are known to enhance nitrogen fixation. Precision farming techniques were also common (53%), highlighting the uptake of technology to improve input efficiency and farm decision-making. Moreover, maintaining at least 70% groundcover during non-drought years was practiced by 53% of respondents, which is critical for erosion prevention and soil moisture retention. This suite of practices demonstrates a strong alignment between landholders' priorities and evidence-based strategies to manage climate variability and long-term land productivity.

Among lifestylers, adoption rates were generally lower but showed a clear interest in environmental stewardship. Despite this, the most frequently reported practice was the use of minimum/no tillage (28%), followed by planting of trees and shrubs (24%), and maintaining groundcover (22%). Lifestylers also showed relatively high engagement with fencing of native bushlands or grasslands (21%), suggesting a focus on biodiversity, conservation, and aesthetic or ecological values over production goals.

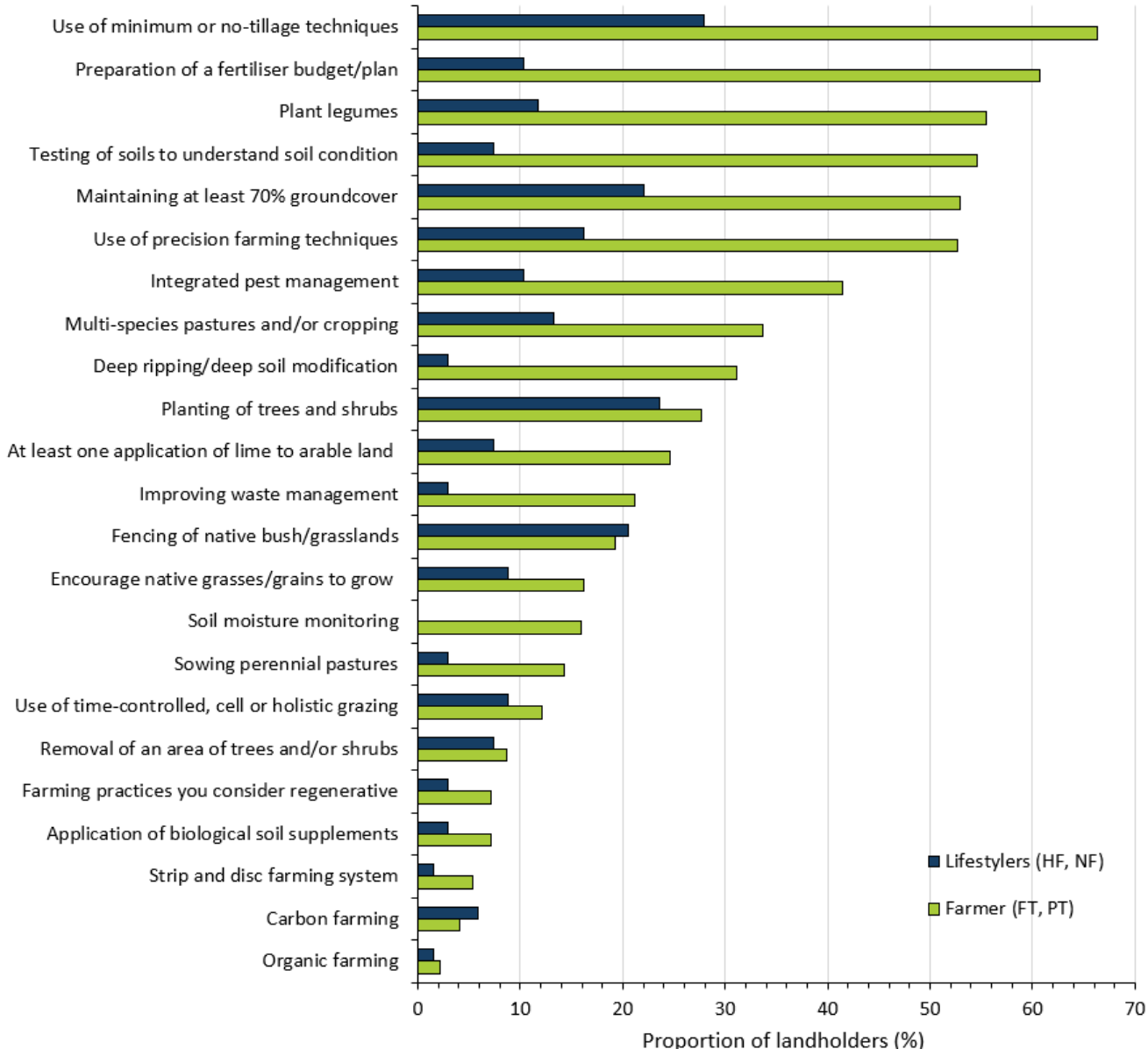

Figure 10. Practices implemented by self-identified farmers (part-time and full-time amalgamated) and lifestylers (hobby farmers and non-farmers amalgamated) since 2020 (n=422).

3.2 CONFIDENCE IN THE IMPLEMENTATION OF BEST PRACTICE

The results indicate that landholders generally expressed strong confidence in foundational soil and land management practices, though overall levels of agreement have declined slightly compared to the 2020 survey (Table 7.). The highest levels of agreement were recorded for the statements: "The benefits of stubble retention outweigh problems arising from the practice" (79% agreement), "Soil testing is an essential step in understanding soil condition" (78%), and "Biological activity is an important indicator of the productive capacity of soils" (76%). These three statements, highlighted in the darkest orange shade, underscore a clear recognition among landholders of the importance of managing soils in a way that supports long-term productivity and ecological function. Despite this, each of these statements saw a 4–6%

decrease in agreement compared to 2020 levels, suggesting either a growing uncertainty or shifting perspectives regarding these practices.

In contrast, statements concerning the economic justification of more capital-intensive or longer-term interventions such as applying lime (40%), establishing perennial pastures (32%), and intensive grazing (45%) were supported by less than half of respondents. These practices may be perceived as carrying greater risk or uncertainty, particularly in challenging climatic and financial contexts. Interestingly, the newly introduced statement "Reduced production in the short-term is justified where there are long term benefits" garnered moderate support (63%), indicating some willingness among landholders to embrace trade-offs in pursuit of long-term outcomes. However, the lower levels of confidence in costlier interventions and collective action models (e.g. grower groups, 58%) may reflect broader barriers to adoption, such as economic pressures, limited resources, or perceived complexity of implementation.

Table 7. Proportion of landholders who agreed or strongly agreed with confidence statements by landholder type for the 2024 Eyre Peninsula Landholder Survey and overall, for the 2020 (n=432-451) and 2024 (n=377-394) survey years. Means (out of 5) are given in brackets and orange shading highlights the top three statements by percentage, with the darkest shade reflecting the highest proportion. Note FT – full time, PT – part time, HF – hobby farmers, NF – non farmers.

Confidence Statement	% Agree / strongly agree							
	Overall (2020)	Overall (2024)	FT (2020)	FT (2024)	PT (2020)	PT (2024)	HF (2024)	NF (2024)
The benefits of stubble retention outweigh problems arising from the practice	84% (4.3)	79% (4.3)	92%	90%	91%	76%	44%	44%
[1] Soil testing is an essential step in understanding soil condition	83% (4.2)	78% (4.1)	84%	82%	93%	87%	79%	44%
Biological activity is an important indicator of the productive capacity of soils	81% (4.2)	76% (4.1)	84%	78%	88%	77%	78%	60%
[1]Fencing to manage stock access is an essential element of protecting waterways, soil and native vegetation	85% (4.2)	75% (4.2)	86%	71%	79%	81%	89%	79%
[1]Reduced production in the short-term is justified where there are long term benefits	NA	63% (3.7)	NA	64%	NA	67%	75%	44%
Grower groups are the best way to drive and direct local research, development and extension	66% (3.9)	58% (3.7)	77%	67%	62%	51%	17%	43%
[1]The cost of deep-tillage and subsoil modification are justified by the benefits	48% (3.7)	51% (3.7)	54%	61%	52%	42%	17%	26%
[1] Intensive grazing for short periods is usually better than set stocking	NA	45% (3.6)	NA	43%	NA	64%	56%	24%
[1] The costs of applying lime to balance soil acidity is justified by increased production	43% (3.8)	40% (3.7)	45%	43%	51%	49%	28%	21%
The costs of establishing perennial pastures are justified by the returns	43% (3.7)	32% (3.4)	44%	33%	53%	43%	28%	19%

[1] Question not included in both surveys or slight difference in wording between survey years - see appendix table X11

3.3 RISK AND OPENNESS TO CHANGE

Comparing 2020 and 2024 data from the Eyre Peninsula Landholder Survey revealed a notable decline in landholder confidence and risk tolerance over the five-year period (Table 8.). The proportion of respondents who "are open to new ideas about farming and land management" remained high but declined slightly from 90% in 2020 to 87% in 2024, suggesting a modest softening in innovation receptiveness. More significant was the decline in statements reflecting proactive or positive attitudes toward risk. For example, agreement with "Financially, I can afford to take a few risks and experiment with new ideas" fell slightly from 44% to 41%, and "I usually view risks as a challenge to embrace" dropped sharply from 57% to 41%. Concurrently, the proportion agreeing with risk-averse sentiments, such as "I prefer to avoid risks", decreased markedly from 58% to 38%, which could suggest either a shift in how risk is perceived or decreased caution, particularly under conditions of financial strain or environmental unpredictability, noting that this survey was undertaken during drought conditions.

Only 32% of respondents agreed that they are "usually an early adopter of new agricultural practices and technologies", down from 41% in 2020, pointing to increasing hesitancy around adopting innovations – but notably this drop was mostly among part-time farmers. Similarly, only 33% of this farmer group reported having "sufficient time to take risks and experiment", reinforcing the possibility that time, alongside financial capacity, acts as a significant constraint on experimentation. Views on social trust also reflect nuanced shifts, with 60% having agreed that "most people are trustworthy", while only 36% agreed with the statement "people are almost always interested only in their own welfare". These results indicate a cautious but not overwhelmingly pessimistic social outlook among landholders in 2024.

When examining the 2024 attitudinal responses by landholder type, notable differences emerge. Part-time farmers showed the highest openness to new ideas (91%), slightly ahead of full-time farmers (87%), while hobby farmers (85%) and non-farmers (79%) followed. This suggests that part-time farmers, perhaps due to exposure to both farming and other industries, may be particularly receptive to innovation. Full-time and part-time farmers also reported the highest financial capacity to take risks (46% and 41%, respectively), compared to just 27% of hobby farmers and 18% of non-farmers. Interestingly, part-time farmers were also more likely to see risk as a challenge (45%), in contrast to hobby farmers (20%), who also reported the highest preference for avoiding risks (60%).

Differences in early adoption and time availability further distinguished landholder groups. Full-time farmers had the highest proportion identifying as early adopters (38%), while only 18% of part-time farmers and 21% of non-farmers did so. This trend suggests that full-time landholders may be more exposed to or invested in emerging practices and technologies. Time availability for experimentation was generally low across all groups, but full-time and part-time farmers reported slightly higher agreement (33% and 34% respectively) compared to hobby farmers (27%) and non-farmers (26%). Trust-related statements also revealed subtle variations, with hobby farmers most likely to agree that

"people are … interested only in their own welfare" (50%). Overall, these findings suggest that engagement with agricultural innovation and attitudes toward risk are closely tied to landholder identity, time and financial resources, and social perspectives.

Table 8. Proportion of landholders that agree or strongly agree with risk and openness statements overall and by landholder type for the 2024 Eyre Peninsula Landholder Survey and overall, for the 2020 (n=412-446) and 2024 (n=335-380) survey years. Means (out of 5) are given in brackets and orange shading highlights the top three statements by percentage, with the darkest shade reflecting the highest proportion.

Risk and openness to change	% Agree / strongly agree					
	Overall (2020)	Overall (2024)	Full-time (2024)	Part-time (2024)	Hobby Farmer (2024)	Non-Farmer (2024)
[1] I am open to new ideas about farming and land management	90% (4.2)	87% (4.0)	87%	91%	85%	79%
[1] Most people are trustworthy	NA	60% (3.5)	59%	56%	62%	61%
[1] I prefer to see evidence of local success before trying a new practice	NA	57% (3.4)	60%	55%	43%	47%
Financially, I can afford to take a few risks and experiment with new ideas	44% (3.2)	41% (3.2)	46%	41%	27%	18%
I usually view risks as a challenge to embrace	57% (3.5)	41% (3.3)	41%	45%	20%	38%
I prefer to avoid risks	58% (3.4)	38% (3.1)	32%	46%	60%	46%
I really dislike not knowing what is going to happen	44% (3.2)	37% (3.3)	34%	45%	50%	35%
People are almost always interested only in their own welfare	48% (3.3)	36% (3.1)	35%	32%	50%	46%
[1,2] I have sufficient time available to take a few risks and experiment with new ideas	NA	33% (3.0)	33%	34%	27%	26%
I am usually an early adopter of new agricultural practices and technologies	41% (3.2)	32% (3.2)	38%	18%	25%	21%
[1] This may not be the best farm around, but I see no reason to change	26% (2.7)	22% (2.6)	23%	20%	35%	19%

[1] Question not included in both surveys or slight difference in wording between survey years - see appendix table X11

[2] Question for 2020 was 'I don't have enough time to consider changing my practices' 17% (2.6).

3.4 TIMING OF STRATEGIC DECISION MAKING

The timeframes considered in strategic decision-making revealed notable differences between farmers and lifestylers (Figure 11.). Farmers most frequently reported considering timeframes of up to 5 years (35%), followed by year-to-year planning (24%) and periods of 6 to 20 years (18%). Lifestylers showed a strong preference for planning up to 5 years (33%), but were more inclined toward short-term and opportunistic approaches, with 12% making decisions opportunistically and 10% seasonally. While long-term considerations (over 20 years) were relatively uncommon across both groups, a

slightly higher proportion of farmers considered timeframes over 20 years (9%) compared to lifestylers (5%). Interestingly, the share of respondents considering extremely long horizons (over 100 years) was low but comparable across groups, at 3% for farmers and 5% for non-farmers.

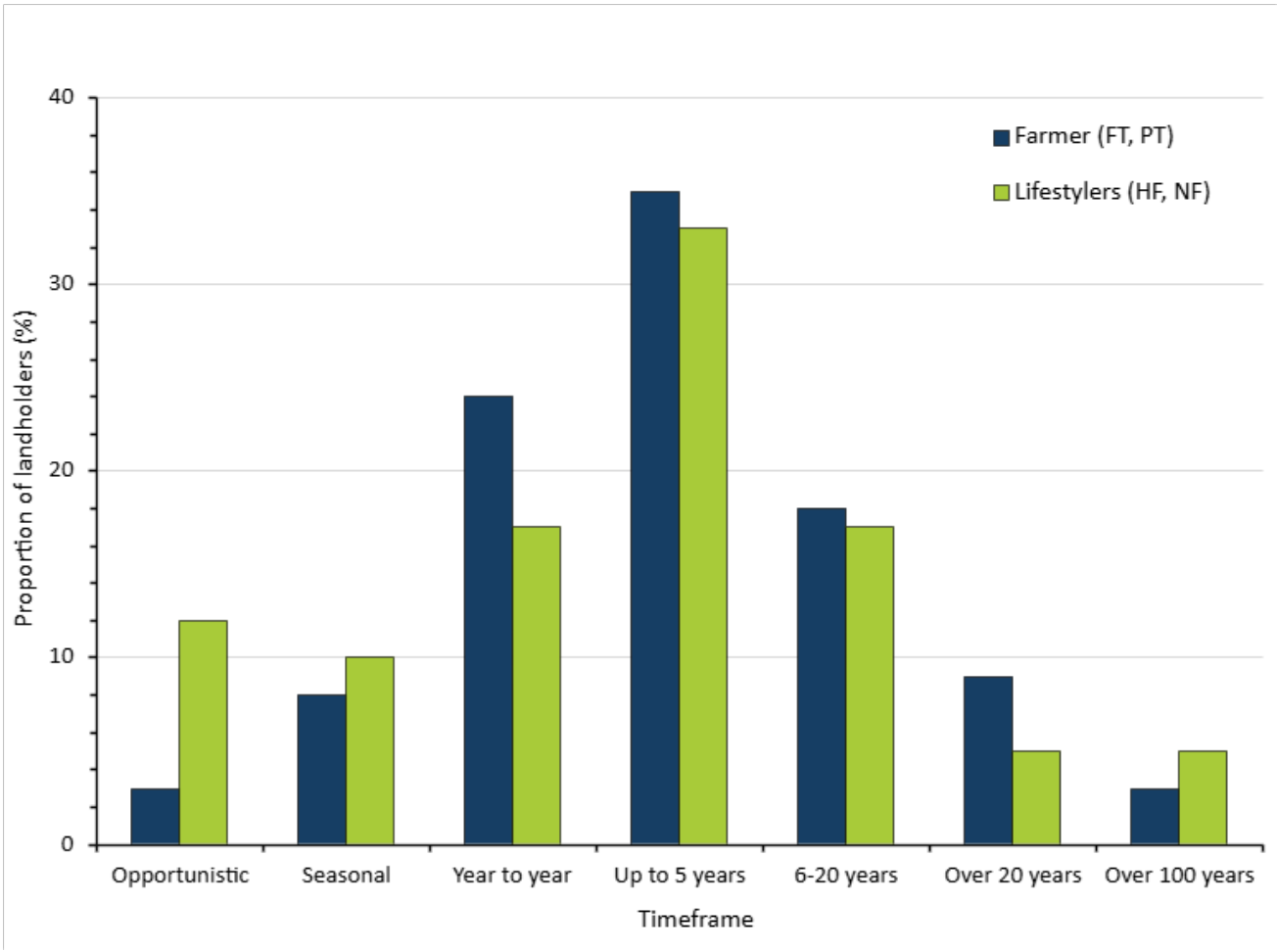

Figure 11. Timeframes that influence strategic decision making for farmers on the Eyre Peninsula in 2024 (n=373).

3.4.1 The decision-making team

The 2024 survey on decision-making participation by landholder type revealed a diverse array of involvement structures across different groups (Figure 12.). Overall, most respondents indicated decisions were made either jointly with a partner (35%) or across multiple generations of a family (36%), suggesting a strong trend toward collaborative decision-making. Full-time farmers were the most likely to involve multiple generations in property decisions (50%), indicating a high degree of intergenerational engagement. In contrast, part-time and hobby farmers demonstrated a stronger tendency toward sole or partner-based decision-making, with 34% and 32% respectively identifying as the sole decision-maker and around one-third in each group involving their partner. This contrasts with non-farmers, 44% of whom reported making decisions jointly with a partner but only 8% with multiple generations, reflecting a generally narrower decision-making base.

The involvement of non-family professional advisors was relatively limited overall, though there were some distinctions by landholder type. Full-time farmers reported the highest levels of consultation with technical or agricultural consultants (13%) and financial advisors or accountants (8%), suggesting a greater reliance on formal expertise. Part-time and hobby farmers, by contrast, showed minimal use of professional support, with 5% or less consulting technical experts and none engaging financial advisors. Interestingly, non-farmers were the most likely to involve property managers, either independently (8%) or jointly with the owner (12%), perhaps reflecting a more hands-off management style. Overall, the data illustrates that full-time farmers rely more on both familial and professional collaboration, whereas part-time, hobby, and non-farming landholders tend to operate with more limited or less diverse decision-making input.

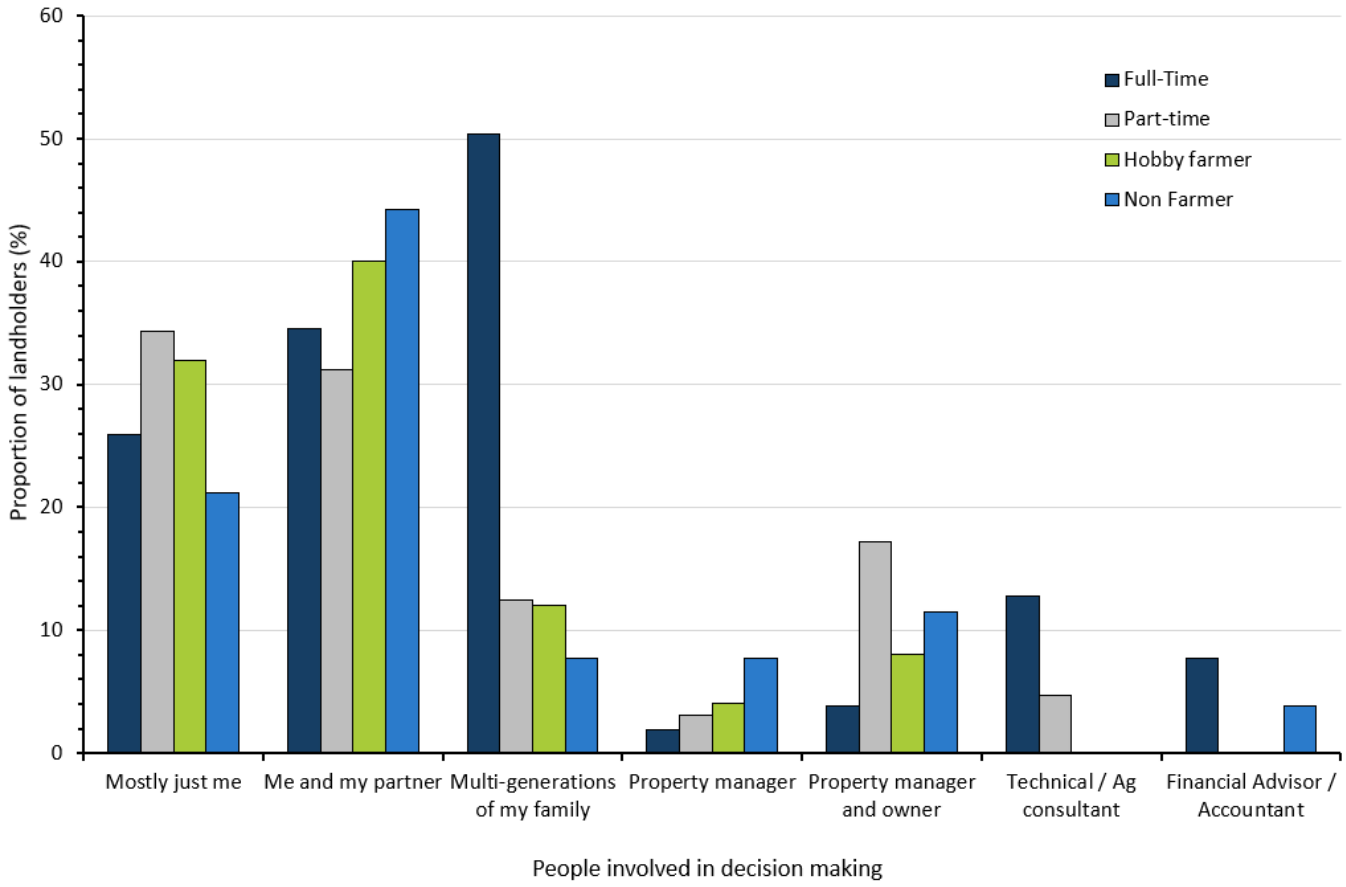

Figure 12. People involved in strategic decision-making by landholder type as identified in the 2024 Eyre Peninsula Landholder Survey (n=417-418).

3.4.2 Management decision leading to profitability in the last 12 months

Landholders responded to two open questions on decisions that had influenced their farm's profitability, one over 12 months, and one over the past four years. The most influential management decisions on farm profitability in the past 12 months strongly reflected adaptation to dry seasonal conditions for cropping (Figure 13.), reflecting the dry year they were experiencing. Many farmers cited dry sowing, early planting, and summer weed control as essential strategies to maximise water-use efficiency and conserve soil moisture. These were often combined with soil amelioration practices such

as delving, deep ripping, and lime application to improve productivity on sandy soils. Decisions around cropping programs, notably the expansion of lentil production and rotation planning, also featured prominently, with several respondents indicating they had either reduced or intensified cropping based on rainfall forecasts. Fertiliser use, rate adjustments, and cost management were frequently mentioned, alongside shifts in crop selection to better align with seasonal conditions and market opportunities.

Livestock-related decisions were also central to profitability, particularly reducing sheep numbers, selling at the right time, and managing containment feeding. Several farmers referenced destocking entirely in response to drought, while others pointed to policy constraints, such as live export bans affecting sheep sales. Financial strategies, including leasing adjustments, share farming, succession planning, and off-farm income, were highlighted as important tools for maintaining viability. Investment in timeliness and efficiency, such as upgrading machinery or implementing agronomic advice, further supported profitability outcomes. Overall, a strong emphasis was placed on tactical decision-making to manage risk, input costs, and seasonal uncertainty in dry times.

Figure 13. Word cloud representation of landholder responses to the question: 'In the last 12 months, what management decision was the most important influence on your profitability?' from the 2024 Eyre Peninsula Landholder Survey (N=435). Each word is emphasised in relation to the number of responses. Source: wordclouds.com

3.4.3 Management decision leading to profitability in the last 4 years

Profitability over the past four years was most influenced by a wide range of agronomic, financial, and structural decisions that were often shaped by seasonal variability (Figure 14.). There were of course many themes. A dominant theme was the management of water availability, however, soil health and other related management practices were

more prominent over this longer time period. Many landholders emphasised the importance of timely sowing, summer weed control, and soil amelioration techniques such as delving, deep ripping, and clay spreading. Dry sowing, minimum or no-till practices, and variable rate fertiliser applications were also regularly cited, supporting efficiency in nutrient and moisture use. Crop rotation, particularly with expanded lentil production, was repeatedly mentioned as a strategy for both income diversification and weed control, often supported by decisions to upgrade machinery or adopt new agronomic technologies. The integration of pasture improvement, fencing, and new grazing systems like rotational grazing also supported these transitions.

Several respondents highlighted financial management strategies including land purchases, leasing arrangements, share farming partnerships, and reducing input costs through forward purchasing or off-farm investments. The exit or reduction of sheep enterprises was a notable trend, often attributed to market volatility, labour shortages, or drought, with a few shifting entirely to cropping operations or Dorper sheep. Decisions were also shaped by broader goals such as succession planning, retirement, or transitioning management to the next generation. Others noted the importance of business planning, accessing finance, and adapting to seasonal forecasts to determine whether and how much to crop. Overall, the responses reveal a strong emphasis on risk management, enterprise flexibility, and capital investment to secure profitability amid variable climatic and economic conditions.

Figure 14. A word cloud representation of landholder responses to the question 'Over the last 4 years, what management decision was the most important influence on your profitability?' from the 2024 Eyre Peninsula Landholder Survey (N=435). Each word is emphasised in relation to the number of responses. Source: wordclouds.com

3.5 DATA MANAGEMENT

3.5.1 Soil data management

The frequency of soil testing among landholders on the Eyre Peninsula in 2024 varies significantly by landholder type, reflecting differences in land management intensity and objectives (Table 9.). Full-time farmers were the most proactive in soil monitoring, with 23% conducting tests annually and a further 54% testing every three to five years. This suggests a strong engagement with soil health among commercial operators who are likely managing their land for ongoing productivity. In contrast, part-time farmers were much less likely to test annually (5%) but had a similar rate (58%) of testing every three to five years, indicating a more periodic approach likely driven by practical or financial constraints.

Hobby farmers and non-farmers were far less engaged in regular soil testing. Only 11% of hobby farmers conducted annual tests, and a substantial proportion had either tested only once (37%) or never (37%). Non-farmers were the least likely to engage in soil testing, with 70% reporting they had never done so, and only 3% testing annually. These patterns suggest that while soil testing is widely recognised as a valuable management tool among those actively engaged in farming, especially full-time operators, there remains a significant gap in adoption among those with less intensive or non-agricultural land use.

A similar question was asked when assessing practices (specifically, testing soils to understand soil condition within the last five years), which produced slightly different results. Full-time farmers agreed with the statement in 59% of cases, compared with 54% reported in Table 9. For part-time farmers, agreement dropped to 38%, whereas Table 9 reported 58%. Hobby farmers agreed 13% of the time (16% in Table 9), and non-farmers only 4% (16% in Table 9).

Table 9. Frequency of soil testing by landholder type for the 2024 Eyre Peninsula Landholder Survey (n=374).

Landholder type	% Landholders who conducted soil testing			
	At least annually	Every 3-5 years	Once	Never
Full-time farmer	23%	54%	15%	7%
Part-time farmer	5%	58%	24%	14%
Hobby farmer	11%	16%	37%	37%
Non-farmer	3%	16%	11%	70%

3.5.2 Influences on soil health

When asked an open question about the most important influences on soil health, respondents overwhelmingly identified rainfall as the dominant factor, with many landholders directly citing "rain," "rainfall," or "moisture" as the primary driver of soil condition, which is clearly pertinent in dry times (Figure 15.). This reflects the critical

dependency of Australian agricultural systems on climatic conditions, particularly in light of ongoing variability and drought risk. Alongside rainfall, groundcover emerged as another consistently mentioned influence, with numerous respondents referencing practices aimed at maintaining vegetative cover, such as stubble retention, reduced tillage, and avoiding overgrazing. These practices were noted not only for their role in protecting against erosion and moisture loss, but also for supporting soil biology and organic matter accumulation.

Other frequently cited influences included nutrient management, particularly the importance of nitrogen, phosphorus, and soil pH balance. Many landholders reported using rotational cropping systems, legumes, and liming to enhance fertility and correct deficiencies. Several highlighted organic matter as central to improving soil structure, carbon levels, and microbial activity. A number of participants mentioned reduced chemical use, conservation tillage, and regenerative practices as beneficial, while others referred to the need for soil testing, amelioration (e.g. gypsum, lime), and adaptive management based on local conditions. Despite a range of perspectives, the responses indicate a shared understanding that soil health is influenced by an interplay of climatic, biological, chemical, and management factors, with rainfall and ground cover serving as foundational components.

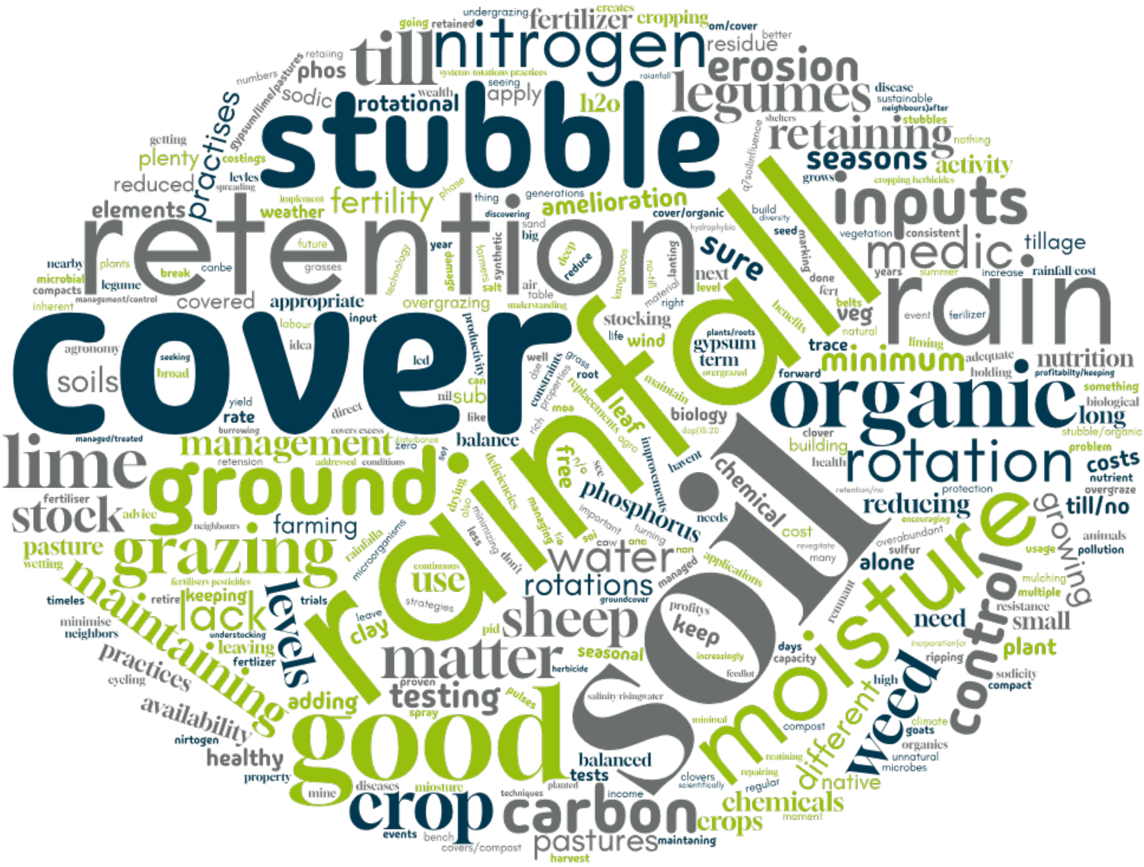

Figure 15. Word cloud representation of landholder responses to the question 'What is the most important influence on your soil health?' from the 2024 Eyre Peninsula Landholder Survey (N=435). Each word is emphasised in relation to the number of responses. Source: wordclouds.com

3.5.3 Testing/indicators to assess soil/land health

Respondents indicated that soil testing remains the most widely used method for assessing soil and land health across a range of landholders. These tests typically measure indicators such as pH, nitrogen (including deep N), phosphorus, organic matter, cation exchange capacity, and other nutrient levels. Many respondents also reported using plant tissue testing, yield mapping, and visual assessments to supplement their understanding of soil condition and crop performance. Tools such as moisture probes, NDVI (normalised difference vegetation index) imaging, and EM (electromagnetic) mapping were noted by some for more advanced monitoring, particularly among larger or more intensively managed operations. Others mentioned using crop and pasture growth, plant colour, soil friability, and organic carbon levels as key physical and biological indicators of land health.

However, the significant number of respondents who indicated that they do not undertake any formal testing said that they instead rely on experience, observation, or advice from agronomists. These landholders tended to reference "visual indicators", "gut feel", or "nothing at present" as their main approach. Several participants highlighted barriers such as cost, uncertainty in interpreting results, or lack of time or expertise. There was also a strong reliance on external advisors, with many landholders stating that agronomists conduct and interpret tests on their behalf. Overall, the responses reflect a broad spectrum of engagement with monitoring practices, from data-intensive, technology-driven approaches to informal, observation-based strategies, shaped by the scale of operations, goals, and resource availability.

3.5.4 Factors driving implementation of management practices

The findings revealed varying adoption rates of land management practices among full and part-time farmers, influenced by their confidence and knowledge levels in the value of these practices. (Table 10.). Soil testing stands out as a practice with high conceptual support and yet moderate implementation: 83% of respondents agreed it is an essential first step in understanding soil condition, yet 55% rated their knowledge on using soil tests to inform planning as sound or very sound. This aligns closely with the 55% who reported having undertaken soil testing in the past four years, suggesting that when confidence and knowledge are reasonably strong, practice adoption is more likely.

Similarly, 61% of landholders reported preparing a fertiliser budget or plan, supported by 63% confidence in planning long-term nitrogen strategies and 59% identifying constraints to productivity, indicating that moderate confidence and knowledge can translate into relatively high implementation. In contrast, practices such as preparing a property management or whole farm plan in line with the existing property situation is modest (49%), yet 74% rated their knowledge of land allocation according to land class or soil characteristics as sound, while only 56% agreed that decision-making should be strongly influenced by scientific evidence. This disparity suggests that while technical knowledge may be high, attitudinal factors, such as the degree to which data is valued in decision-making, may affect actual practice uptake.

The adoption of more specialised or complex management techniques, such as time-controlled or holistic grazing (12%) is limited, likely due to both low confidence (47%) and particularly low knowledge (23%) among landholders. Similarly, the fencing of native bush

or grasslands to manage stock access was reported by only 19% of landholders, despite a relatively high 73% agreeing on its ecological importance (although this is likely due to already established fencing across the region).

No-till or minimum-till practices, already widely adopted (66%), align with both high confidence (87%) in the benefits of stubble retention and strong technical knowledge (79%) regarding erosion control. This demonstrates how a convergence of conceptual support and technical competence significantly enhances adoption. Overall, these findings underscore the critical role of both confidence and knowledge in facilitating the uptake of sustainable land management practices.

Table 10. Implementation of management practices compared to related confidence and knowledge in the practice for farmers (full-time and part-time farmers amalgamated) identified in the 2024 Eyre Peninsula Landholder Survey (n=377-422).

Management Practice	% Farmers undertaking practice	Confidence	% Agree or strongly agree	Knowledge	% Sound or very sound
Testing of soils to understand soil condition	55% past 4 years	Soil testing is an essential first step in understanding soil condition	83%	How to use soil testing to inform planning, to increase soil productivity (e.g. a nutrient budget)	55%
Preparation of a fertiliser budget/plan for all/most of the property	61% past 4 years	I am confident planning long-term nitrogen strategies (balancing costs, risks and expected benefits)	63%	How to identify the main constraints to soil productivity on your property	59%
Prepared/ preparing a property management or whole farm plan	49%	Decision-making needs to be strongly influenced by data/scientific evidence	56%	Preparing a farm/property plan, allocating land according to land class/soil characteristics	74%
Application of biological soil supplements	7% past 4 years	Biological activity is an important indicator of the productive capacity of soils	78%	How to build soil organic matter/soil carbon	49%
Sowing perennial pastures	14% past 4 years	The costs of establishing perennial pastures are justified by the returns	35%	Options and strategies to (re)establish perennial pastures (e.g. lucerne/native grasses) in this area	35%
Fencing of native bush/grasslands to manage stock access	19% past 4 years	Fencing to manage stock access is an essential element of protecting waterways, soil and native vegetation.	73%	Potential applications of 'virtual fencing'	14%
Use of minimum or no-tillage techniques	66% past 4 years	The benefits of stubble retention outweigh the problems arising from the practice	87%	Strategies to maintain groundcover to minimise erosion in this area	79%
Use of time-controlled, cell or holistic grazing	12% past 4 years	Intensive grazing for short periods is usually better than set stocking	47%	The use of time controlled, holistic or cell grazing strategies	23%

3.6 BEST PRACTICE MODELLING

A number of best practices for farm, soil and land management were modelled using linear or logistical regression modelling, as well as analysed using pairwise comparisons, with the following outcomes:

Planting an area of trees (all landholders)

The modelling showed that the most important factors working together to influence tree planting in recent years was having a knowledge of pre-settlement land management and anthropogenic climate change, having a view that fencing is worth doing, and being female (R2=0.17).

The pairwise comparisons revealed that the most important correlating factors for landholders planting trees, are as follows:

1. Having sound knowledge of the role of remnant vegetation/understory plants in supporting the natural ecosystem.
2. Concern about anthropogenic climate change (p= 4.1E-05); its potentially dire consequences; and the loss of native plants and animals in the landscape.
3. They are likely to also be installing fences, viewing them as important for managing stock access and protecting native vegetation. Nine other best practices correlated with planting trees, which were carbon farming, maintaining groundcover, IPM, applying lime, planting multi-species pastures, native grasses, improving waste management, and they were likely to see themselves as regenerative farmers.
4. Those planting trees are more likely to be coping with stressors (p= 1.7E-03) and managing their farm with a partner and/or be female.
5. Caring for the earth and living in harmony with nature was an important life principle for this group.

Soil testing (farmers only)

A strong model revealed that the most important factors working together to influence implementation of soil testing were having completed year 12, having a whole farm plan in place, understanding of holistic farm management, viewing liming as important, and having land lost due to soil production issues (R2=0.64).

The pairwise comparisons revealed that the strongest correlating factors were as follows:

1. Knowledge about soil management practices were the top strongest correlations, including how to apply soil tests, identify constraints and apply mitigating practices such as planting legumes and allocate land use according to land class. This group drew on a wide variety of information, from 18 different listed sources. Independent and commercial consultants, other farmers and AIR EP were the top four sources.
2. Confidence in the efficacy of soil testing was next most important, being of a view that soil testing is an essential step in understanding soil condition.

3. Attitudinal factors were the next grouping. Considering themselves an early adopter was highly correlated, as was prioritising reinvestment of profit in the farm; being open to new ideas; being of a view that decisions should be driven by data. They were likely to have good systems in place to manage farm data.
4. The next item was the attached value of passing on a healthier environment to future generations. Other important values attached to the farm that linked with soil testing were the productive value of their soil; building the value of the farm as an important source of income; and a place to raise a family. Also, producing quality food and being a part of positive change in farming.
5. Education levels also linked strongly with those undertaking regular soil testing more likely to have completed a Tafe certificate or a university qualification.

They were more likely to be earning income, and more likely to be turning a profit than farmers not undertaking soil testing.

Soil moisture probes (farmers only)

The modelling showed that the most important factors working together to influence use of soil moisture probes were having larger farms; predisposition to trust and specifically trusting in information provided by AIR EP, having a succession-plan underway, and being of a view that liming is worth the returns (R2=0.2).

The pairwise comparisons revealed that the strongest correlating factors were as follows:

1. Knowledge of the soil moisture probe network; how to plant legumes; and how to allocate land according to land class.
2. A strong view that AIR EP should work in an advocacy role for farmers in the region; use and view them as a valuable information source and trust that they have landholder needs in mind when prioritising research strategies. They were commonly accessing information via field days, brochures, YouTube and podcasts. Independent agronomic advisors were their second most important source of information, with commodity groups the third.
3. Their land size was larger (3982Ha for those using the probes, vs 2748Ha for those who were not).
4. A range of attitudinal factors correlated significantly, including being open to new ideas about farming and land management, viewing themselves as an early adopter. They feel a personal responsibility to take care of their soil; be involved in their local grower group; be of a view that decision-making should be driven by data; and have a propensity to embrace risks.
5. They were more likely to have multiple generations involved in strategic decision-making on their farm; with a successor in place to keep the farm in the family.

Use of soil moisture probes correlated with the implementation of 14 other best-practices and sound knowledge of how to interpret and apply data from soil tests.

Whole farm planning (farmers only)

The modelling showed that the most important factors working together to influence

whole farm planning was: wanting to be a part of positive change in farming; changing practices to mitigate for changes in seasonal weather patterns; having a knowledge of time controlled grazing; and confident in planning long term nitrogen strategies, balancing costs and risks. (R2=0.29).

In the pairwise, the most important correlating factors for whole farm planning were:

1. Knowledge, including how to identify and address soil constraints, use soil-test results to develop a nutrient budget and allocate land according to land class.
2. The next most strongly correlating factor was a future focus on diversification and reinvesting in their farm, which included planning for climate resilience, sequestering carbon, undertaking disaster-management planning and planning for unpredictable seasons.
3. This was closely followed by the value of the farm as a great place to raise a family and providing a sense of belonging.
4. Seeing oneself as an early adopter, being open to new ideas about farming, and the farm itself as an opportunity for learning.
5. Timeframe of decision-making, which showed that those undertaking whole farm planning were more likely to be planning over a five to 20 year period, whereas those not undertaking whole farm planning were more likely to be planning over a seasonal or year to year basis. They were more likely to be including a child in decision-making.

Regenerative agriculture (farmers only)

The modelling showed that the most important factors linked with implementation of regenerative agriculture, were: setting land aside for conservation; concerns about land use changes impacting farmland; decreasing use of synthetic inputs; working with a sibling on the farm; and knowledge of how to support the persistence of native grasses (R2=0.42).

The pairwise comparisons revealed that the strongest correlating factors were as follows:

1. The most important correlating factor was the sense of accomplishment from producing food and fibre for others that they associate with their properties (p=1.8E-03) and the ability to pass on a healthier environment for future generations (p= 4.2E-02), combined with the life principles caring for the earth and living in harmony with nature (p=1.01E-02), and social justice/caring for others (3.34E-02).
2. The second was knowledge of holistic land management, including how to support the persistence of native grasses, plant legumes, build carbon, manage erosion and the role of on-farm biology and remnant vegetation in supporting the local ecosystem (AVp= 2.7E-02). This also linked with understanding carbon or biodiversity markets (p= 4.6E-02).
3. The third was reinvesting in the farm; feeling confident managing their farm in the face of increased uncertainty; having sufficient time to do what they wish and try new things (p=3.6E-02); and working with a sibling.
4. The fourth was confidence in regenerative agriculture being worth the returns; having an interest in learning more about regenerative agriculture; and use of

information sources that included AIREP, the Eyre Peninsula Landscape Board, books, journals, Landcare and universities); and being an innovator (not needing to see local success to try something new).

5. The fifth was an overall decrease in the use of synthetic inputs per hectare.

Practices that strongly correlated were good waste management, maintaining groundcover, testing soils, planting legumes, applying biological amendments, strip 'n' disc farming, planting trees, deep ripping and intended carbon farming and no/minimum tillage.

Precision farming (farmers only)

The modelling showed that the most important factors linked with implementation of precision agriculture, were: wanting to be a part of positive change in farming; intention to keep the farm in the family; confidence in the application of deep tillage; concerns about decline of services in rural areas; and increasing chemical application overall ($R2=0.39$).

In the pairwise comparisons, undertaking precision-farming linked with the following:

1. Knowledge about best-practice soil management, including how to use soil-test results to identify soil constraints and allocate land use according to land class. Also, how to address soil issues, including erosion, and build carbon. Also, knowledge of the Soil Moisture Probe Network.
2. A life principle to create wealth, and values they attach to the farm, including having a sense of accomplishment from building/maintaining a viable business, the productive value of their soil, an opportunity for learning; an important asset, source of income and place to raise a family; pass on a healthier environment; be a part of positive change in farming; and providing a sense of belonging.
3. Satisfaction with productivity, with impacts of deep ripping, confidence managing nitrogen strategies.
4. They were likely to have family working on the farm, with a successor in place.
5. They were likely to be making a profit in the last financial year and over four years and were feeding those profits back into their farm. Independent advisors were very important for this group.

Being younger made you slightly more likely to be implementing this practice.

Practices that strongly correlated were deep ripping, preparing a nutrient budget, IPM, maintaining at least 70% groundcover, planting legumes, no/minimum-tillage, liming, improving waste management practices, soil testing and use of soil moisture probes.

It had a negative correlation with multi-species pastures and sowing perennial pastures. It linked with 12 different information sources, which included AIR EP, local councils, environmental groups, rural R&D organisations such as SARDI and GRDC, using the modes of brochures, journal articles, Twitter/X, WhatsApp, TV and podcasts. These farmers were most likely to be planning over a five-year time horizon, with a substantial number with year to year as their timeframe for strategic planning and a similar number

who planned over a time horizon of up to 20 years. They were far more likely to be working with multiple generations on the farm, particularly children, who were often involved in decision-making. Precision farming linked with seven issues that included inadequate support for new and young farmers, an absence of services and infrastructure, weed impacts and weed resistance to herbicides. Soil water holding capacity and phosphorus availability were the two linked soil issues. Overall, those implementing precision farming were less likely to be decreasing the quantity of synthetic inputs per hectare (2.52/5 vs 2.85/5).

IPM (farmers only)

The pairwise comparisons showed that the main areas linked with implementation of IPM were:

1. Reinvesting in their farm, with their farm intended to stay in the family. This group were likely to have more farms and be expanding their land area. Integrated pest management linked with 18 other best practices.
2. Knowledge of soil management and practices that included planting legumes, fencing, soil moisture probes, and the role of on-farm biology for supporting the natural ecosystem, as well as how to use soil test results to identify constraints and apply nutrients. There was also a link with interest in regenerative agriculture/holistic land management.
3. AIR EP as an important and trusted information source, as well as commercial and independent consultants and commodity groups, using twitter, brochures and WhatsApp groups.
4. Attached values associated with belonging, identity, wealth and learning were important. The most important two were building a viable business and taking care of the land for future generations. Wealth creation was the only guiding life principle that correlated significantly with IPM.
5. Farmers applying IPM tended to be, on average, five years younger than those not applying it, and working with other family members on the farm, including partners and parents.

Carbon farming (farmers only)

A very strong model showed that the most important factors linked with implementation of carbon farming, were: valuing the health of their land for future generations; knowledge of local first nations groups; concern about the low level of organic carbon in soils; allowing establishment of native grasses; and having a succession plan in place (R^2=0.91).

Biological supplements (farmers only)

A strong model showed that the most important factors linked with application of biological soil supplements were: considering oneself an early adopter; attending soil-health field days; reinvesting in the property; and having bees on the farm (R^2=0.43).

Perennial pastures (farmers only)

A reasonably strong model showed that the most important factors linked with sowing perennial pastures were: confidence it was worth the returns; acknowledgement of anthropogenic climate change; knowledge about using time controlled, holistic or cell grazing; and trust in AIR EP as an information source (R2=0.37).

4. ENGAGING FARMERS

4.1 KNOWLEDGE OF CURRENT RECOMMENDED PRACTICE

Between 2020 and 2024, there was a modest increase in the proportion of landholders who self-assessed their knowledge as "sound" or "very sound" across several key land management and ecological topics on the Eyre Peninsula. Notably, knowledge related to preparing a farm/property plan and allocating land use according to land class or soil characteristics rose from 58% in 2020 to 62% in 2024 (Table 11.). This increase, alongside improvements in awareness of topics such as the role of remnant vegetation and the EP soil moisture probe network, suggests a gradual enhancement of landholder understanding in technical and ecological aspects of land management. However, other knowledge areas saw limited improvement or a decline in self-rated knowledge, indicating uneven progress across the surveyed topics. Options for (re)establishing perennial pastures had a notable decline. Strategies for time-controlled grazing also declined, though this may be due in part to a slight change of wording from the 2020 survey that also included rotational grazing.

New topics introduced in the 2024 survey also reveal important insights into emerging knowledge gaps. For example, understanding of how to introduce more legumes/pulses into enterprise mixes scored 55% overall, which is relatively high compared to other topics, suggesting growing interest in soil health and biological inputs. Conversely, awareness of market mechanisms supporting biodiversity and carbon, as well as knowledge of Aboriginal group connections to the land, remained very low, with only 8% and 13% respectively assessing their knowledge as sound or very sound. These findings highlight that while technical and agronomic knowledge has slightly improved, cultural and policy-oriented knowledge areas continue to be less understood, pointing to opportunities for targeted extension and education efforts in these areas.

When comparing landholder types in 2024, full-time farmers consistently reported higher levels of self-assessed knowledge across nearly all topics. For instance, 79% of full-time farmers felt confident in preparing a property plan based on land class, compared to just 17% of non-farmers and 22% of hobby farmers. Similarly, 69% of full-time farmers reported sound knowledge of introducing legumes/pulses, while part-time farmers followed at 44%, and hobby farmers and non-farmers were much lower (17% and 15% respectively). This pattern makes sense in that those more actively and professionally engaged in farming have greater exposure to, and understanding of, agronomic and land management practices, likely due to their regular involvement in on-farm decision-making and technical advice networks.

In contrast, hobby farmers and non-farmers showed stronger or comparable knowledge only in culturally oriented topics. For example, 30% of hobby farmers and 18% of non-farmers felt knowledgeable about pre-European land use in their district, compared to only 15% of full-time farmers. Interestingly, non-farmers also had the highest awareness of Aboriginal groups connected to their area (31%), significantly exceeding all other landholder types. These results suggest that while full-time farmers lead in applied, production-focused knowledge, hobby farmers and non-farmers may engage more with

historical and cultural aspects of land stewardship. This divergence underscores the importance of tailoring extension efforts to the distinct interests and knowledge bases of different landholder groups.

Table 11. Self-assessed sound or very sound knowledge by landholder type for the 2024 Eyre Peninsula Landholder Survey and overall, for the 2020 (n=411-455) and 2024 (n=338-399) survey years. Means (out of 5) are given in brackets and orange shading highlights the top three knowledge topics by percentage, with the darkest shade reflecting the highest proportion.

Knowledge topic	% Sound / very sound						
	Overall (2020)	Overall (2024)	FT (2020)	FT (2024)	PT (2024)	HF (2024)	NF (2024)
[1]Preparing a farm/property plan, allocating land use according to land class/soil characteristics	58% (3.5)	62% (3.7)	68%	79%	52%	22%	17%
[1]How to (re)introduce more legumes/pulses into your enterprise mix	NA	55% (3.5)	NA	69%	44%	17%	15%
[1]The role of remnant vegetation/ understorey plants in supporting the natural ecosystem	22% (2.8)	37% (3.2)	19%	40%	35%	30%	33%
[1]The role of on-farm biodiversity for supporting soil and landscape health	NA	34% (3.0)	NA	39%	34%	22%	15%
[1]Options and strategies to (re)establish perennial pastures in this area	39% (3.2)	30% (3.0)	42%	35%	37%	4%	8%
The EP Soil moisture probe network	18% (2.4)	23% (2.5)	24%	30%	15%	4%	8%
[1]The use of time controlled, holistic or cell grazing strategies	28% (2.9)	20% (2.7)	32%	23%	25%	17%	5%
How to support the persistence of native grasses in this area	17% (2.6)	19% (2.7)	17%	20%	26%	9%	10%
How land in your district was used and managed before European settlement	16% (2.5)	17% (2.4)	17%	15%	21%	30%	18%
Farming practices that lead to more nutrient dense food	17% (2.5)	17% (2.5)	20%	20%	9%	16%	7%
Holistic farm management and/or regenerative agriculture	22% (2.7)	16% (2.6)	25%	18%	13%	22%	5%
Potential applications of 'virtual fencing'	17% (2.4)	13% (2.4)	20%	16%	8%	9%	8%
The Aboriginal group/s who are connected to the area where your property is located	15% (2.3)	13% (2.3)	16%	9%	20%	13%	31%
[1]Market mechanisms providing funds to support the building of carbon and/or biodiversity	NA	8% (2.1)	NA	9%	5%	0%	10%

[1] Question not included in both surveys or slight difference in wording between survey years - see appendix table X11

4.1.1 Knowledge of soil processes and management

Between 2020 and 2024, self-assessed soil knowledge among landholders on the Eyre Peninsula has shown moderate improvement across several key indicators, although some topics reflect stagnation or slight decline (Table 12.). Knowledge relating to strategies for maintaining ground cover to minimise erosion, which had the highest level of confidence in 2020 (75%), declined slightly to 72% in 2024, though it remains the most well-understood soil topic. Meanwhile, knowledge of how to identify soil productivity constraints rose from 47% to 51%, and understanding of processes leading to soil health decline increased from 45% to 49%. This incremental progress reflects a gradual enhancement in landholder awareness of the biophysical factors affecting soil health, potentially driven by growing exposure to soil monitoring tools and management resources.

In contrast, some areas have shown limited or no improvement, particularly where technical or scientific knowledge is required. For example, knowledge on building soil organic matter declined slightly from 50% to 44%, and the perceived benefits of applying biological soil supplements also decreased from 35% to 30%. However, several new topics introduced in the 2024 survey provide additional insight into emerging gaps. Only 35% of respondents felt confident in understanding the role of soil carbon and microbiology in soil health, and just 30% had sound knowledge of using biological supplements. These figures suggest that while foundational agronomic practices are relatively well understood, there remains a need for more accessible education on soil biology and the application of regenerative inputs.

When comparing landholder types in 2024, full-time farmers consistently reported significantly higher levels of soil knowledge than other groups. For instance, 82% of full-time farmers indicated sound knowledge of ground cover strategies to prevent erosion, compared to 66% of part-time farmers, 48% of hobby farmers, and just 33% of non-farmers. Similarly, 63% of full-time farmers felt confident in identifying soil constraints and selecting appropriate tools to address them, while only 38% of part-time farmers and 13% of both hobby and non-farmers reported the same. These disparities likely reflect differences in access to agronomic advice, experience with land management, and the economic incentives tied to maintaining productive soils.

In contrast, hobby farmers and non-farmers consistently reported the lowest levels of knowledge across nearly all topics, particularly in technical areas such as using soil testing to guide nutrient budgeting (13% and 12%, respectively) and understanding how to improve soil productivity. Interestingly, hobby farmers showed slightly higher knowledge of the role of soil biology and the benefits of biological supplements than part-time farmers, perhaps indicating an interest in more experimental or regenerative practices. Nonetheless, the overall pattern underscores a significant gap in technical soil knowledge between professional farmers and more recreational or absentee landholders. Targeted extension services and tailored communication strategies may be required to engage and upskill part-time and hobby landholders, who often manage land but lack the same level of technical support or motivation to seek out detailed agronomic information.

Table 12. Self-assessed sound or very sound soil knowledge by landholder type for the 2024 Eyre Peninsula Landholder Survey and overall, for the 2020 (n=449-457) and 2024 (n=386-393) survey years. Means (out of 5) are given in brackets and orange shading highlights the top three knowledge topics by percentage, with the darkest shade reflecting the highest proportion.

Knowledge topic	% Sound / very sound						
	Overall (2020)	Overall (2024)	FT (2020)	FT (2024)	PT (2024)	HF (2024)	NF (2024)
Strategies to maintain ground cover to minimise erosion in this area	75% (3.9)	72% (3.9)	86%	82%	66%	48%	33%
How to identify the main constraints to soil productivity on your property	47% (3.4)	51% (3.4)	56%	63%	41%	17%	18%
[1]The processes leading to declining soil health or structure in this area	45% (3.3)	49% (3.5)	50%	60%	43%	17%	18%
[1]Appropriate strategies and tools to address soil constraints on your property	NA	49% (3.4)	NA	62%	38%	13%	13%
[1]How to use soil testing to inform planning, to increase soil productivity (e.g. a nutrient budget)	38% (3.0)	47% (3.4)	46%	59%	38%	13%	12%
How to build soil organic matter/ soil carbon	50% (3.4)	44% (3.4)	58%	53%	35%	22%	15%
[1]The role of soil carbon/microbiology (e.g. bacteria and fungi) in soil health	NA	35% (3.0)	NA	41%	26%	35%	20%
[1]The benefits of applying biological soil supplements (e.g. compost, manure, microbial inoculants)	35% (3.2)	30% (3.0)	37%	35%	21%	26%	15%

[1] Question not included in both surveys or slight difference in wording between survey years - see appendix table X11

4.2 ACCESSING INFORMATION

The results suggest that landholders engage with information in a variety of ways, with field days (53%), websites (46%), and newspapers (42%) being the most commonly utilised modes (Figure 16.). Digital channels such as emails (40%) and websites showed strong uptake, while more traditional formats like brochures and newsletters (34%) are less frequently used. These figures reflect a mixed approach to information-seeking, influenced by both technological access and the perceived relevance or applicability of information delivery methods.

Full-time and part-time farmers showed higher engagement across nearly all modes of information. Full-time farmers reported the highest use of field days (62%), websites (51%), and emails (48%), reflecting an active, professional approach to land management and a preference for interactive and digital learning. Part-time farmers similarly showed strong

engagement with newspapers (47%) and field days (52%), indicating an ongoing commitment to staying informed, albeit with slightly less reliance on digital formats compared to their full-time counterparts.

In contrast, hobby and non-farmers displayed substantially lower engagement with most information modes. Both groups reported limited attendance at field days (24%) and reduced use of digital sources such as websites (32–35%) and emails (15–24%). Traditional sources like newspapers (28% hobby; 17% non-farmers) and brochures (16% hobby; 11% non-farmers) are also less frequently accessed. These patterns suggest that non-commercial landholders may have fewer incentives or requirements to seek out technical or industry-specific information, possibly due to differing land use priorities or time constraints.

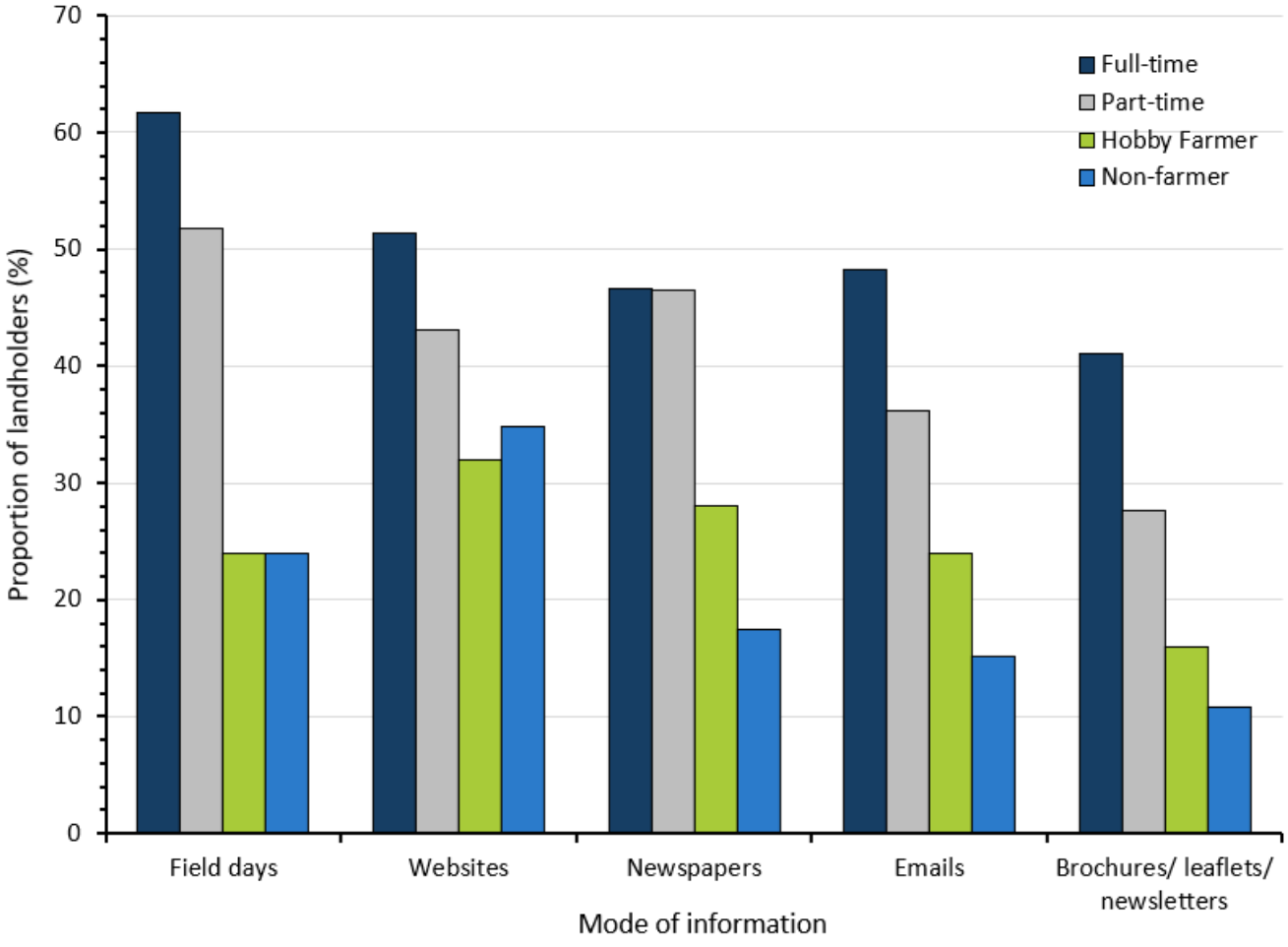

Figure 16. Top five modes of information by landholder type for the 2024 Eyre Peninsula Landholder Survey (n=408-410). Note: full results for full and part time farmers are available in appendix X9a and X10a.

The results suggest that Eyre Peninsula landholders primarily rely on peer networks and personal experience as key sources of information (Figure 17.). "Other farmers" were the most frequently cited source (77%), followed by self-acquired knowledge from personal experience (61%), and social contacts such as friends, neighbours, and relatives (58%). Professional and institutional sources such as independent consultants (49%) and the Bureau of Meteorology (45%) were consulted to a lesser extent. These patterns reflect a

strong culture of peer-to-peer learning and experiential knowledge-sharing across the region.

Full-time and part-time farmers reported significantly greater reliance on peer and professional networks. Other farmers were the most common source for both groups (84% full-time; 86% part-time), followed by personal experience (69% and 55%, respectively) and social networks (64% for both). Full-time farmers were especially likely to engage with independent consultants or agronomists (61%), in contrast to part-time farmers (33%). This trend suggests that more commercially oriented landholders place higher value on both experiential learning and technical advice to inform decision-making and productivity strategies.

Hobby and non-farmers, by contrast, showed markedly lower engagement with all information sources, especially professional services. While 68% of hobby farmers cited other farmers as a source of land management information, only 37% of non-farmers did so. Reliance on personal experience was also much lower (36% hobby; 35% non-farmers), as was engagement with friends and relatives (44% and 22%, respectively). Both groups reported minimal use of independent advisors (16% and 17%), and comparatively modest use of the Bureau of Meteorology (40% and 35%). These figures suggest that hobby and non-farmers tend to adopt a more passive or socially distanced approach to information gathering, possibly due to differing land use goals or less intensive management requirements.

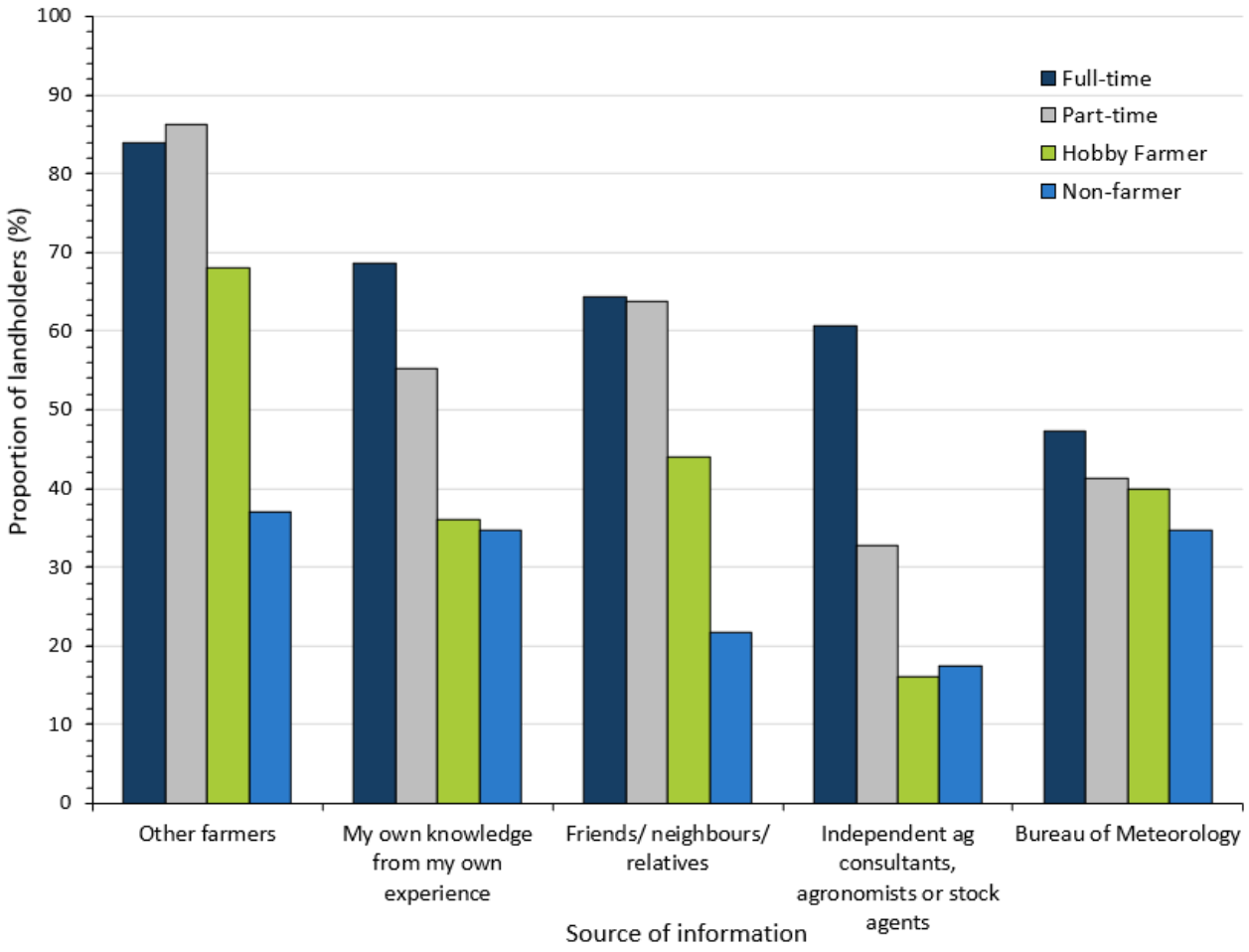

Figure 17. Top five sources of information by landholder type for the 2024 Eyre Peninsula Landholder Survey (n=408-409).

4.2.1 Information consumption by generation

The results indicate that landholders across generational groups engage with a range of information modes, with field days emerging as the most consistently used method (Figure 18.). Attendance at field days was evenly high among Baby Boomers+ (55%), Generation X (54%), and Generation Y- (55%), highlighting a shared appreciation for hands-on, locally relevant learning experiences. Newspapers also showed relatively consistent engagement, particularly among Baby Boomers+ (47%) and Generation Y- (48%), suggesting that traditional print media remains a valuable source of information across age cohorts. Similarly, brochures, leaflets, and newsletters retained moderate popularity among all groups, ranging from 33% (Gen X) to 38% (Gen Y-), indicating a continued, though limited, role for printed materials.

Digital information modes showed more distinct generational variation. Generation Y- exhibited the highest use of websites (61%) and a relatively high use of emails (41%), reflecting a clear preference for online engagement. In contrast, Baby Boomers+ were less inclined to use websites (44%) and emails (37%), suggesting a digital divide between older and younger cohorts. Generation X occupied a middle position, with 47% using websites and the highest engagement with email (47%) among all age groups. These trends underscore a shift toward digital communication among younger landholders

while highlighting the importance of maintaining a blend of traditional and digital outreach methods to ensure inclusive information dissemination across all generations.

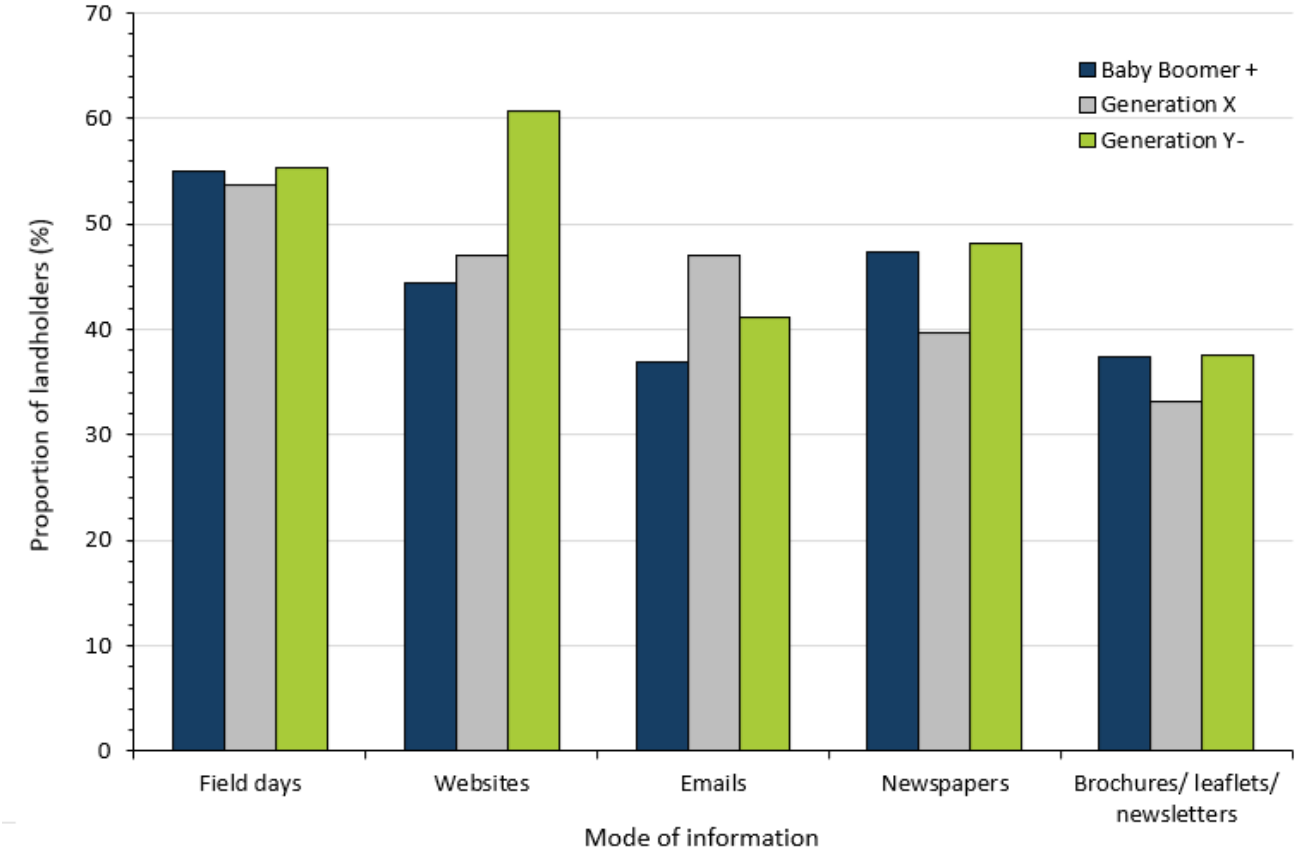

Figure 18. Top five modes of information overall by Baby Boomer+, Generation X, and Generation Y-, for the 2024 Eyre Peninsula Landholder Survey (n=408-410).

When we focus on information sources, we find a strong reliance on peer-to-peer knowledge sharing evident across all groups. "Other farmers" were the most widely cited source, particularly among Generation Y- (88%), followed by Generation X (81%) and Baby Boomers+ (78%) (Figure 19.). Similarly, "friends, neighbours, and relatives" were an important source for younger respondents (75%), highlighting the continued value of social networks and informal communication channels, especially among younger generations. In contrast, reliance on one's own knowledge and experience was highest among Baby Boomers+ (63%) and Generation X (66%), reflecting the accumulated expertise of older landholders and a potentially more self-reliant approach to decision-making.

Professional advice showed a notable generational gradient, with increasing reliance on independent and commercial agricultural consultants among younger cohorts. Generation Y- reported the highest engagement with both independent (57%) and commercial consultants (55%), suggesting a proactive approach to incorporating expert advice into land management. Generation X followed with moderate engagement (51% and 46%, respectively), while Baby Boomers+ were least likely to consult commercial advisors (32%). Interestingly, use of the Bureau of Meteorology was highest among Baby Boomers+ (51%), declining to 41% and 40% among Generations Y+ and X, respectively. These patterns point to generational shifts in trust, access, and preferences for

information, with younger landholders demonstrating greater openness to diverse sources, particularly those offering technical or specialised support.

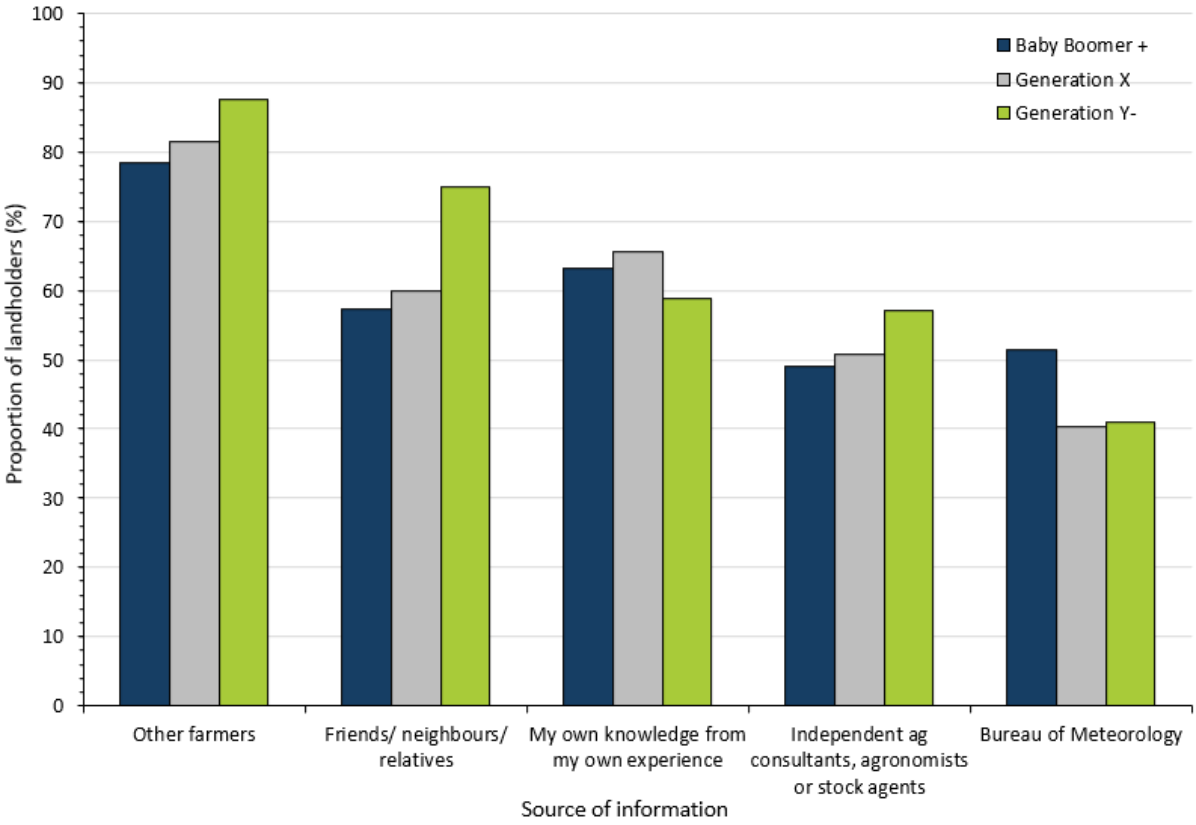

Figure 19. Top five sources of information overall by Baby Boomer+, Generation X and Generation Y- for the 2024 Eyre Peninsula Landholder Survey (n=408-409). For more information see appendix X9b and X10b.

4.2.2 Information consumption across survey years

The data from the 2020 and 2024 Eyre Peninsula surveys highlight a notable decline in the use of traditional and digital media for accessing information over the five-year period (Figure 20.). Field days remained the most commonly used mode of information across both years, though it saw a slight drop from 56% in 2020 to 53% in 2024. Websites also saw a decrease in usage from 54% to 46%, while newspapers and emails experienced more significant drops, from 53% to 42% and 49% to 40%, respectively. Magazines showed the sharpest decline, dropping from 49% in 2020 to 32% in 2024, reflecting a reduced reliance on print media. Brochures, leaflets, and newsletters also saw a small decline from 37% to 34%.

More traditional media such as television and books experienced a sharp fall in usage for information, dropping from 34% to 20% for television and from 25% to 15% for books. Similarly, the use of academic journals and research papers for information fell from 25% to 15%, highlighting a broader trend of reduced engagement with more formal or academic sources of information. These trends suggest a shift away from traditional forms of media and printed materials toward potentially more specialised or digital information sources, though the full extent of these changes requires further analysis to understand the underlying factors driving these declines.

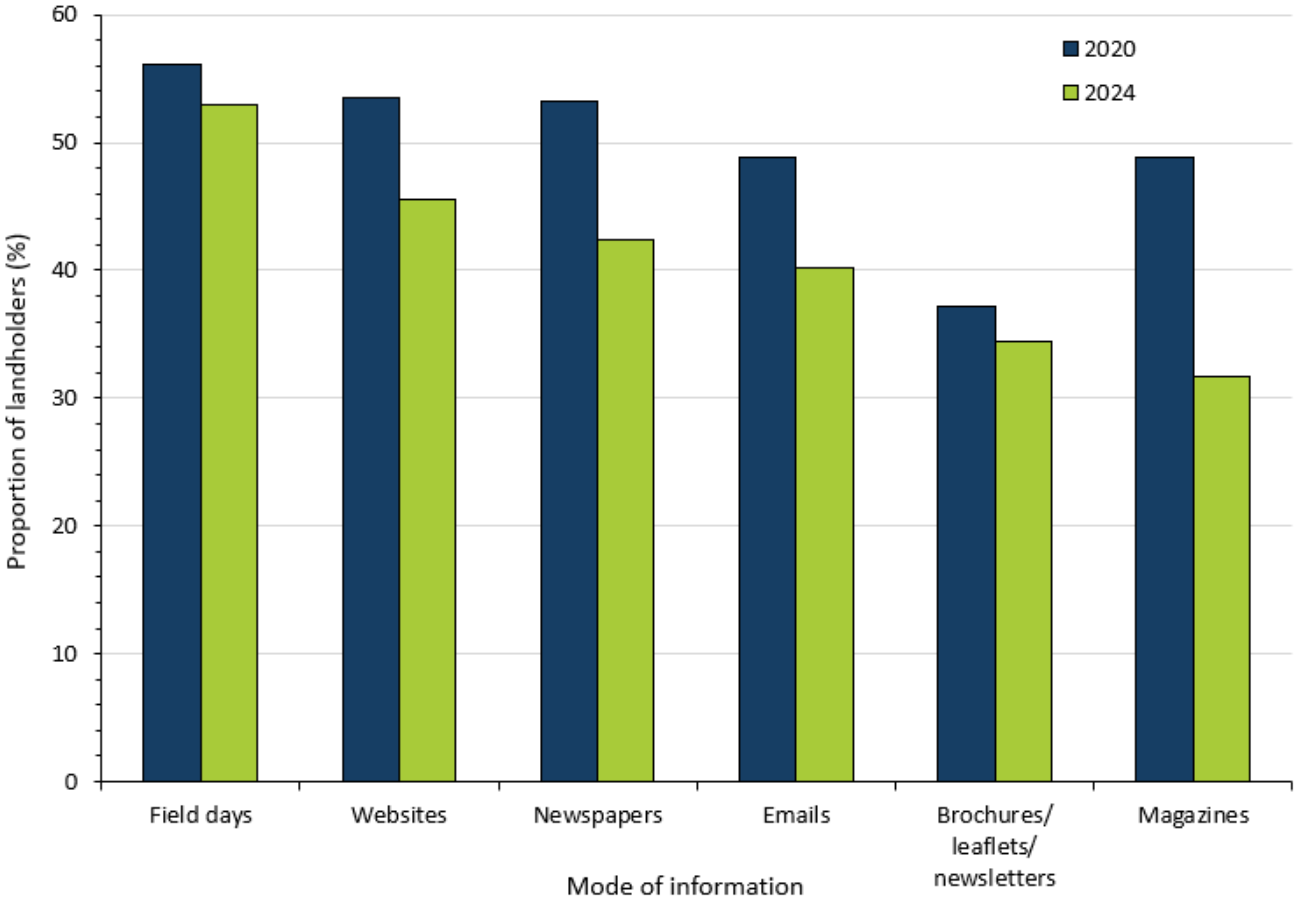

Figure 20. Comparison of the top modes of information for landholders overall across the 2020 (n=460-462) and 2024 (n=408-410) Eyre Peninsula Landholder Survey years.

Between 2020 and 2024, the overall reliance on peer-based sources of information among landholders on the Eyre Peninsula remained strong, with "other farmers" continuing as the most cited source at a consistent 77% (Figure 21.). However, the use of "friends, neighbours, and relatives" declined notably from 67% in 2020 to 58% in 2024. This shift may reflect changes in community engagement, demographic turnover, or a gradual move toward more formalised sources of knowledge.

Similarly, the use of institutional and professional sources of information showed a downward trend over the five-year period. Reliance on the Bureau of Meteorology decreased significantly from 59% in 2020 to 45% in 2024, possibly due to changing perceptions of the usefulness or accessibility of this official forecasting. The use of independent agricultural consultants also fell, from 55% to 49%, suggesting a potential decline in the perceived value, affordability, or availability of professional advisory services. Overall, while informal peer networks remain central to knowledge exchange, the decline in both informal and formal sources points to a shifting information landscape that warrants further exploration.

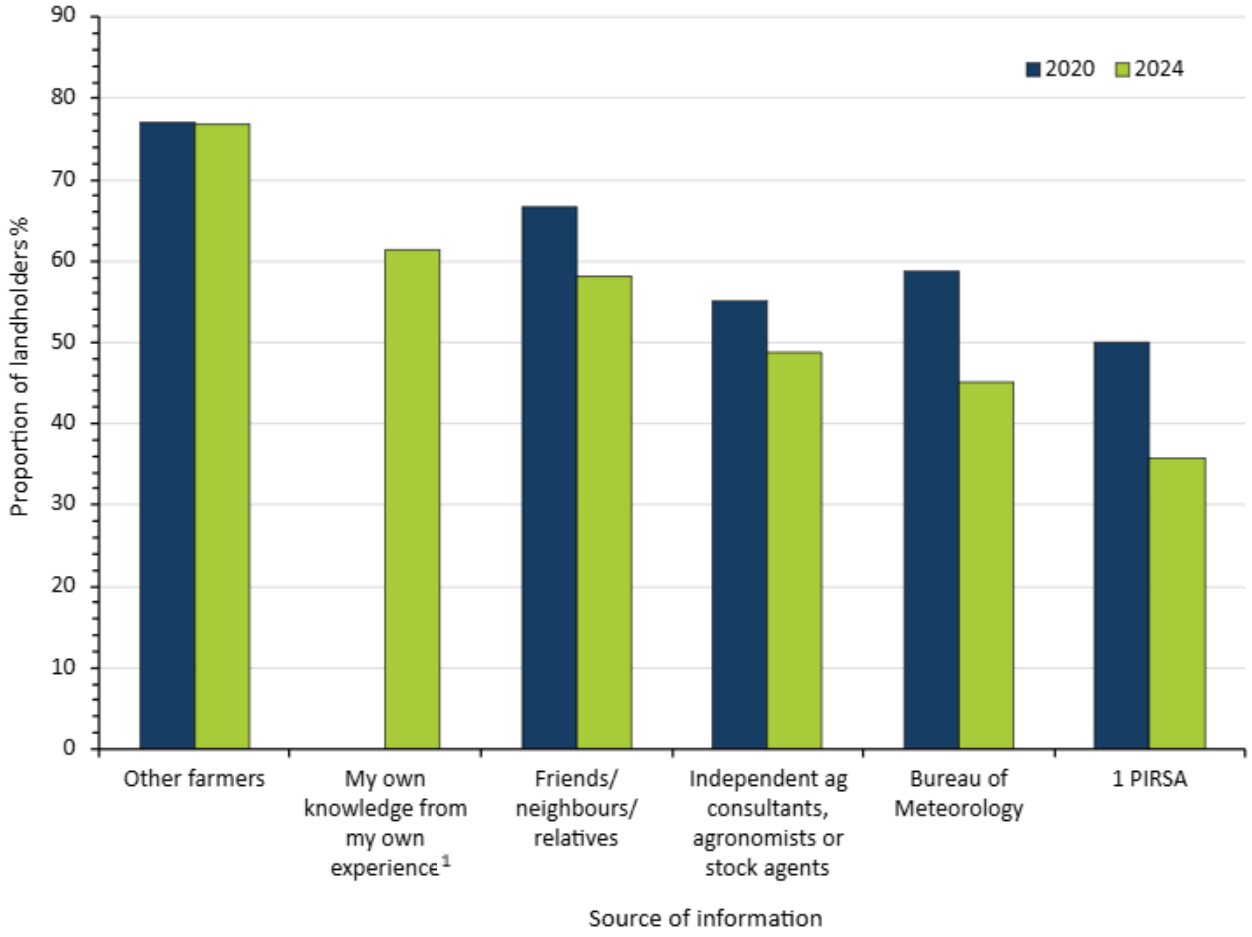

Figure 21. Comparison of the top sources of information for landholders overall across the 2020 (461-462) and 2024 (n=408-409) Eyre Peninsula Landholder Survey years. [1] Question not included in both surveys or slight difference in wording between survey years - see appendix *table X11*

4.3 SOURCES OF SUPPORT

The findings reveal varying perceptions of support for farming and land management activities across different landholder types (Table 13.). Overall, only half (50%) of respondents felt adequately supported, with full-time farmers expressing the highest level of agreement (59%), while part-time (42%), hobby (28%), and non-farmers (21%) felt significantly less supported. This suggests that those most engaged in agriculture perceive higher levels of institutional support compared to those less directly involved.

Perceptions of compensation or support for good land and soil stewardship were notably low across all groups, with just 15% of respondents overall agreeing or strongly agreeing that adequate support exists. Interestingly, part-time farmers were the most positive (28%), while hobby farmers (6%) and non-farmers (10%) expressed the least confidence. These findings highlight a broader concern among landholders regarding recognition and incentives for sustainable land management practices.[1]

Across generations, perceptions of support for farming and land management vary, though overall levels remain moderate to low. A majority of Baby Boomers and older respondents (53%) felt adequately supported in conducting activities on their property,

compared with lower agreement among Generation X (45%) and Generation Y+ (45%). However, when considering compensation or support for good land and soil stewardship, agreement dropped significantly across all groups, with only 19% of Baby Boomers+, 13% of Generation X, and just 7% of Generation Y+ respondents expressing confidence in existing measures.

Table 13. Views about support by landholder type and overall, for the 2024 Eyre Peninsula Landholder Survey (n=387).

Support statement	% Agree / strongly agree						
	Overall (2020)	Overall (2024)	FT (2020)	FT (2024)	PT (2024)	HF (2024)	NF (2024)
I feel adequately supported to conduct farming and land management activities on my property	59% (3.7)	50% (3.4)	67%	59%	42%	28%	21%
There is adequate compensation or support for good land/soil stewardship	NA	15% (2.6)	NA	13%	28%	6%	10%

4.3.1 Technology and innovation to support farm management goals

A dominant theme across responses is the need for more accurate and longer-term weather forecasting, which was mentioned repeatedly as a critical support for decision-making, especially in light of increasingly variable climatic conditions (Figure 22.). Respondents identified drought, rainfall unpredictability, and extreme events as major challenges, and thus emphasised both short- and long-range forecasting as vital. Technologies that improve weed and pest control, including WeedSeeker, WeedIT, and various forms of autonomous or drone-based sprayers, were also highly sought after, with several respondents specifically mentioning “green-on-green” or camera-guided spot spraying systems. Additionally, there is interest in virtual fencing, both for cattle and sheep, as a means of improving grazing efficiency and landscape management without additional fencing infrastructure.

Another key area of interest is soil management and amelioration technologies, such as deep ripping, delving, spading, and the use of biological soil amendments. Respondents highlighted challenges on sandy or non-wetting soils and a need for tools that can enhance productivity and build soil carbon. Some also pointed to a desire for education and technical support, such as agronomic advice, holistic planning, and benchmarking groups. Other themes included sowing equipment for perennial pastures, remote monitoring tools, data-driven decision support platforms (e.g. Agriwebb, Agworld), and plant breeding innovations (e.g. drought-tolerant cereals). While a few responses expressed scepticism or focused on personal or social issues (e.g. retirement planning, government policies), the majority showed a strong appetite for practical, productivity-enhancing innovations grounded in local conditions.

Figure 22. Word cloud representation of landholder responses to the question: 'Is there a particular technology/tool/innovation/knowledge that would support your farm management goals?' from the 2024 Eyre Peninsula Landholder Survey (N=435). Each word is emphasised in relation to the number of responses. Source: wordclouds.com.

5. CHALLENGES ON THE LAND

5.1 REGIONAL ISSUES

The survey revealed a broad consensus among landholders on several key regional issues, with water security emerging as the top concern across all landholder types during this unusually dry year, shown in Figure 23. Over 85% of respondents in each category—full-time, part-time, hobby farmers, and non-farmers—identified water security as highly important, reflecting the region's increasing vulnerability to water scarcity under changing climatic conditions. Closely associated with this were concerns about the availability and cost of water for livestock, particularly among full-time (84%) and part-time (82%) producers. The prominence of these water-related issues underscores the critical role of water access in sustaining agricultural productivity and rural livelihoods. Another commonly reported priority was support for new and young farmers, with particularly strong concern shown by full-time producers (84%) and non-farmers (84%). This likely reflects broader concerns around generational renewal, access to land, and the economic viability of farming for younger entrants.

Differences emerged in perceptions of environmental and ecological issues, particularly among hobby farmers and non-farmers. A notably higher proportion of these groups were concerned about the loss of native plants and animals (75% and 76%, respectively) and changes in weather patterns (75% and 78%, respectively), compared to full-time producers. These patterns suggest differing priorities based on landholder motivations, with hobby and non-farming respondents tending to prioritise biodiversity conservation and landscape resilience.

Lastly, infrastructure gaps and service provision were pressing concerns, especially for full-time producers. An overwhelming 93% of full-time farmers identified the absence of critical infrastructure and services (e.g. communications, health, education, roads) as a major issue, compared with 53% of non-farmers. This suggests that producers who rely on farming as a primary livelihood are more directly affected by service limitations. Other issues such as public opposition to agricultural practices, conflicting land uses, and the impacts of absentee landownership were less universally prioritised but still present in the discourse, particularly among full-time and hobby farmers, indicating ongoing tension around land use values and community expectations.

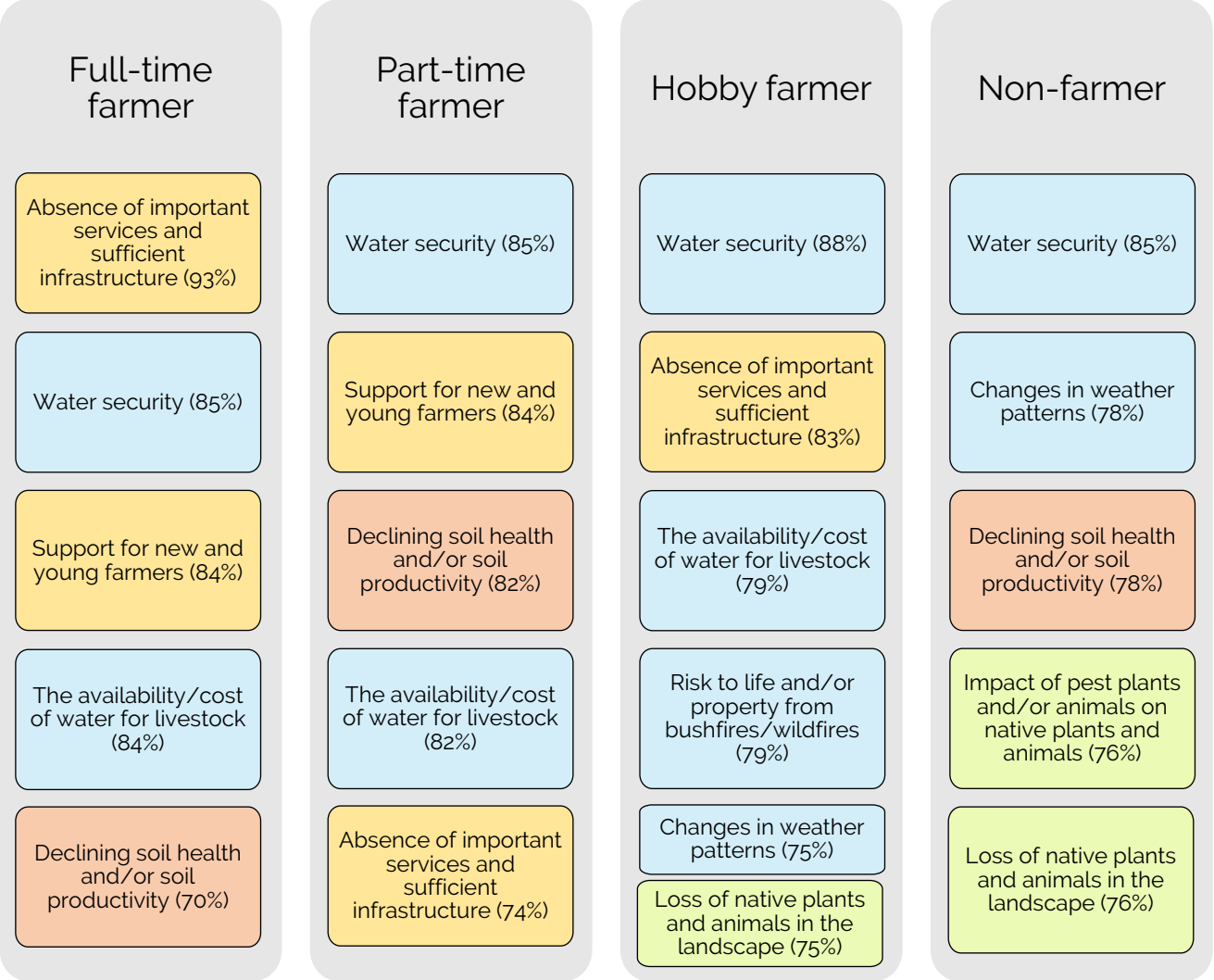

Figure 23. Top five most important district scale issues by landholder type identified in the 2024 Eyre Peninsula Landholder Survey (n=324-399). Issues related to climate change in blue, soil issues in orange, social issues in yellow and environmental impacts in green.

5.2 PROPERTY-SCALE ISSUES

Prominent issues at property-scale suggest that full-time farmers prioritise issues directly linked to productivity and farm viability (Figure 24.). The top concern, cited by 98% of full-time respondents, is rising input costs, reflecting a high level of financial pressure on commercial operations that coincides with the extreme dry period. This is closely followed by uncertainty around returns (83%), which limits the ability to invest in property maintenance and improvements. The third most pressing issue, shared by 75% of full-time farmers, is the impact of pests and weeds—including overabundant native species—on productivity. This concern was mirrored by similarly high levels of concern around chemical resistance and the water-holding capacity of soils, highlighting the critical importance of effective input management and soil health for this group.

Part-time farmers also ranked rising input costs (89%) and uncertain returns (82%) as their top two concerns, aligning closely with the priorities of full-time operators. The third key issue for part-time landholders was the water-holding capacity of soils (71%), likely linking unreliable rainfall with soil biology. This group also showed significant concern for weed and pest pressures (71%) and phosphorus availability (70%), suggesting that while

operating at a smaller or more diversified scale, part-time farmers still face complex agronomic challenges that affect productivity and land sustainability.

For hobby farmers, the most prominent concern is the impact of climate variability, with 75% indicating that temperature extremes and rainfall changes affect their property management and productivity. This is a distinct contrast to commercial operators, for whom economic factors dominate. The second most cited issue among hobby farmers is the activities of neighbouring landholders (70%), pointing to potential land use conflicts, spray drift, or boundary management issues that are more visible in smaller holdings. Their third most pressing concern is rising input costs (63%), mirroring the concerns of full and part time farmers.

For non-farmers, the top three issues identified in the 2024 survey reflect environmental and land management concerns more so than commercial production pressures. The most commonly cited issue was the impact of weeds and pest animals, including overabundant native species, with 68% of non-farmer respondents identifying it as important or very important. The second most cited concern was weed and pest resistance to herbicides, pesticides and/or fungicides, reported by 61%, indicating a significant awareness of the limitations of conventional chemical control methods and the need for more sustainable management options. In third place was the impact of temperature extremes and/or changing rainfall patterns, identified by 58%, reflecting concern for the effects of climate variability on land condition and future viability. These results suggest that while non-farmers are less engaged in intensive production, they remain highly aware of environmental issues and are likely to support initiatives that promote ecological resilience and responsible land stewardship

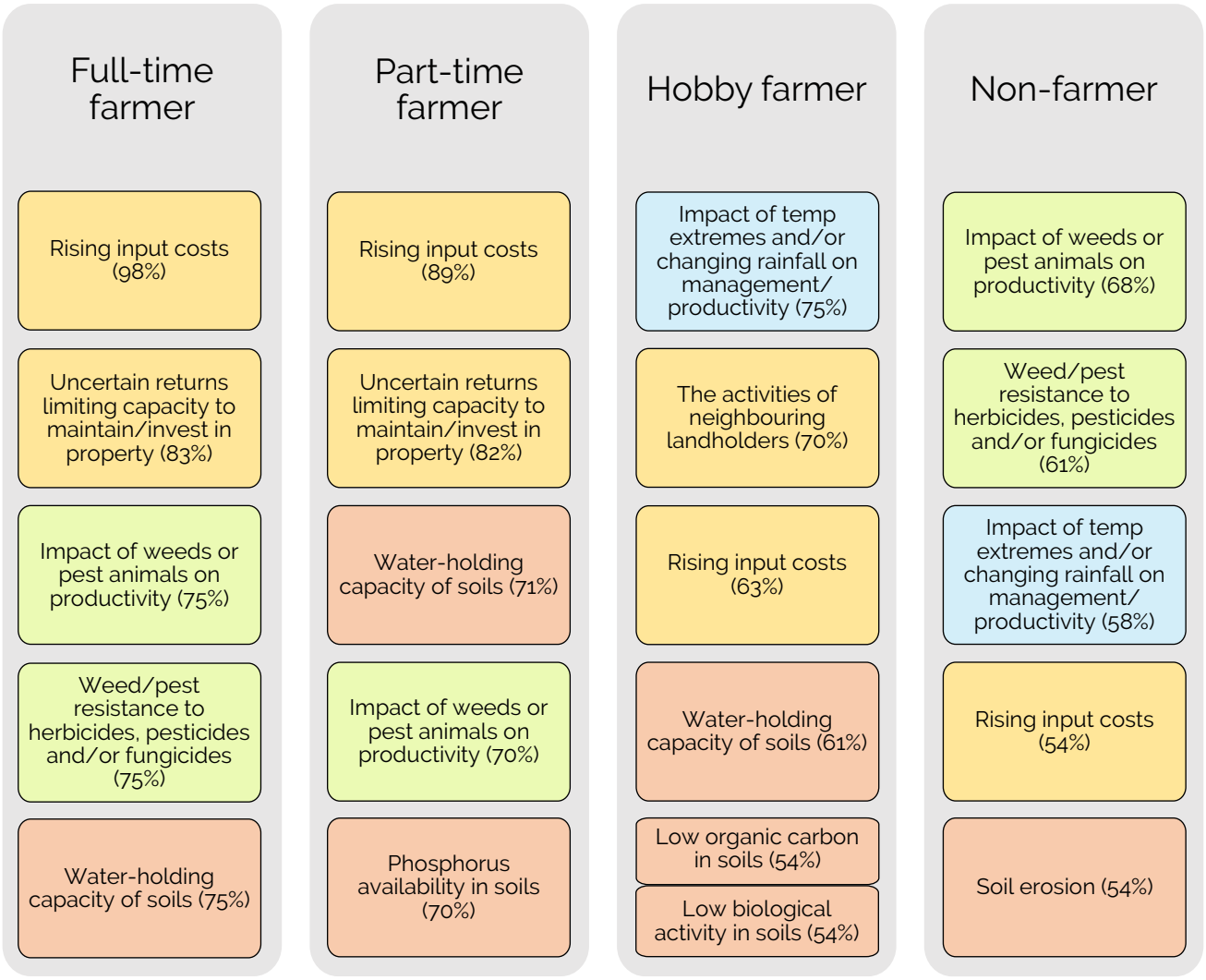

Figure 24. Top five most important property-level issues by landholder type identified in 2024 Eyre Peninsula Landholder Survey (n=374-398). Issues related to climate change in blue, soil issues in red, social issues in orange and environmental impacts in green.

5.2.1 Future challenges and/or opportunities

An open question asked about significant challenges and opportunities anticipated over the next decade for Eyre Peninsula landholders. Many of those raised are interconnected and deeply rooted in structural, environmental, and socio-political factors (Figure 25.). A prevailing concern was the rapid and sustained rise in input costs, and landholders described these being related to fuel, fertilisers, chemicals, machinery, and labour; which many respondents cited as eroding the profitability of farming enterprises. Numerous farmers expressed anxiety over the increasing costs of production outpacing commodity prices, a dynamic often referred to as the "cost-price squeeze." For some, these economic pressures were exacerbated by additional burdens such as high-interest rates and significant debt servicing obligations. This situation was particularly pronounced for small- to medium-scale farms, where the rising cost of land can be seen as both a challenge to profitability and a barrier to generational succession.

Climate variability and the intensifying impacts of climate change also emerged as critical concerns. Landholders highlighted more frequent extreme weather events, including droughts and frosts, as major threats to long-term viability. Additionally, reduced and

poorly timed rainfall, alongside growing concerns about water access and security, were viewed as constraints on productivity and resilience. Some respondents voiced frustration with government responses to environmental management, noting increasing regulation, bureaucratic red tape, and interference from urban-based activists as challenges to their autonomy and decision-making. Concerns about chemical bans, restrictions on land clearing, and poorly informed public opinion were frequently mentioned, reflecting a strong sentiment of disconnect between rural communities and metropolitan governance.

Succession planning and ageing demographics within the agricultural sector were other dominant themes. Many landholders expressed concern about their ability to retire comfortably while ensuring their properties remain viable and productive under the stewardship of future generations. For older respondents, the twin pressures of health and financial security were often mentioned, with several indicating uncertainty over who would take over their farms or whether their children had the interest or capacity to continue farming. Some saw opportunities in this context—such as scaling down operations, diversifying into ecotourism or bush food production, or engaging in land regeneration projects—as ways to manage transition while contributing positively to the landscape and community.

Despite the breadth of challenges, a number of respondents identified opportunities for innovation, sustainability, and adaptation. These included adopting regenerative agriculture practices to enhance soil health and biodiversity, exploring off-grid and carbon farming models, and investing in technologies that improve efficiency and profitability. For a few, community-building and fostering intergenerational knowledge transfer were considered crucial for long-term success. The responses suggest that while many landholders are under considerable pressure, there remains a strong commitment to land stewardship, local economies, and the social fabric of rural life—albeit tempered by a growing need for policy support, infrastructure investment, and respect for the lived experiences of those working on the land.

Figure 25. Word cloud representation of landholder responses to the question: 'In the next 10 years, what would you see as likely being your biggest challenge and/or opportunity?' from the 2024 Eyre Peninsula Landholder Survey (N=435). Each word is emphasised in relation to the number of responses. Source: wordclouds.com.

5.2.2 Importance of soil-related issues on the property

Between the 2020 and 2024 surveys, several shifts in landholders' perceptions of soil-related issues emerged (Table 14.). The importance of phosphorus availability rose significantly, increasing from 53% in 2020 to 66% in 2024, placing it among the top three issues in the more recent survey. Similarly, water-holding capacity of soils, a newly introduced issue in 2024, was identified as the most important, with 69% of respondents rating it as important or very important. In contrast, issues such as low biological activity and soil erosion declined in perceived importance. Concern about low biological activity dropped from 63% to 53%, while concern about soil erosion decreased from 68% to 61%.

When comparing landholder types in 2024, full-time farmers consistently rated soil-related issues as more important than other groups. For example, 75% of full-time farmers identified water-holding capacity as important, compared to 71% of part-time farmers, 61% of hobby farmers, and just 41% of non-farmers. Similarly, concern about phosphorus availability was highest among full-time (73%) and part-time (70%) farmers, but much lower among hobby farmers (39%) and non-farmers (36%). Soil erosion, while not in the overall top three, also showed a clear divide, with 65% of full-time and 56% of part-time farmers citing it as important, compared to 50% of hobby and 54% of non-farmers. These patterns suggest that those more actively engaged in commercial farming are more

attuned to productivity-related soil constraints, whereas hobby and non-farmers place lower priority on such issues, likely reflecting differences in production goals, land use intensity, and exposure to the economic risks tied to soil function.

Table 14. Importance of soil-related issues by landholder type for the 2024 Eyre Peninsula Landholder Survey and overall, for the 2020 (n=289-457) and 2024 (n=374-393) survey years. Means (out of 5) are given in brackets and orange shading highlights the top three issues by percentage, with the darkest shade reflecting the most important issue.

Soil-related issue	% Important / very important					
	Overall (2020)	Overall (2024)	Full-time (2024)	Part-time (2024)	Hobby Farmer (2024)	Non-Farmer (2024)
[1]Water-holding capacity of soils	NA	69% (3.9)	75%	71%	61%	41%
[1]Phosphorus availability in soils	53% (3.6)	66% (3.8)	73%	70%	39%	36%
Soil erosion (e.g. due to wind or water)	68% (3.9)	61% (3.7)	65%	56%	50%	54%
[1]Declining fertility/nutrient status of soils, therefore increased inputs required	57% (3.6)	55% (3.6)	60%	54%	50%	36%
Chemical residue in soils	56% (3.7)	55% (3.5)	58%	59%	39%	44%
Low level of biological activity in soils	63% (3.8)	53% (3.5)	53%	53%	54%	43%
Low levels of organic carbon in soils	57% (3.7)	51% (3.4)	54%	50%	54%	35%
Soil-borne diseases	56% (3.6)	50% (3.4)	53%	45%	42%	44%
[1]Salinity (e.g. magnesia patches, Mallee seeps) undermining productive capacity of soils	~38% (3.2)	45% (3.2)	50%	41%	29%	33%
[1]Soil sodicity undermining productive capacity of soils	39% (3.2)	44% (3.2)	47%	46%	41%	33%
Soil acidity (lower pH) undermining productive capacity of soils	37% (3.2)	39% (3.0)	43%	43%	38%	18%
[1]Unintended impacts of previous soil amelioration strategies	29% (3.0)	34% (2.9)	36%	39%	30%	26%

[1] Question not included in both surveys or slight difference in wording between survey years - see appendix table X11

~Assessed at the regional level

5.2.3 Land lost to productivity

An assessment of land lost to production due to soil problems revealed that 30% of all landholders were affected, with an average of 123 hectares lost per affected property. The extent of land loss varied notably across landholder categories: 40% of full-time

farmers reported land loss, averaging 145 hectares; 17% of part-time farmers reported losses averaging 23 hectares; and 18% of hobby farmers reported an average of 12 hectares lost. Among non-farmers, only 2% reported land loss, with an average of 5 hectares. These figures highlight the differential impact of soil degradation on land productivity, particularly among more commercially oriented farming operations, and also relate to land size.

A thematic review of these responses reveals that the two most frequently cited issues leading to land lost from productivity were salinity and erosion. Salinity—including variants such as "salt," "sodicity,", "dry saline land" and "saline soils"—was the most commonly reported problem, often linked to rising water tables, historic dryland salinity, and long-term degradation, suggesting both current and legacy issues are impacting productivity. Dry saline land (commonly referred to as magnesia patches locally), often appeared in relation to salinity, indicating a compounded chemical limitation in affected areas. Erosion, particularly wind erosion and soil drift, was another widespread concern. It was noted in association with sand blowouts, sheep impacts, and exposure of non-wetting sands due to seasonal conditions, highlighting both climatic and land management influences.

Other notable issues include mallee seeps, which were referenced multiple times and often in conjunction with salinity, indicating their role in mobilising salts and waterlogging in the landscape. Waterlogging and flood damage were also cited, with some references to major flood events in recent years contributing to current land loss. Additional problems such as non-wetting sands, rocky soils, prickly pear invasion, overstocking, and lack of rainfall reflect a broader spectrum of physical, biological, and climatic factors affecting productivity. While these were not as frequently mentioned as the top three themes, their presence indicates the multifactorial nature of land degradation and the diversity of challenges faced by landholders.

5.3 MODELLING LANDHOLDER ATTRIBUTES

Wellbeing

The model showed that the important factors linked with farmer wellbeing were: being satisfied with their productivity; feeling supported in their farming practice; and knowledge about pre-colonial land management and planting legumes (R2=0.42).

In the pairwise comparisons, coping with the stresses of farm management linked with the following:

1. Feeling supported in their farming activities
2. Having sufficient time and money) to manage their farm and try new things, having, on average, turned a profit over the previous 4 years.
3. Feeling satisfied with their farms' productivity.
4. Disposition to trust people.
5. Confidence they can adapt to climate change and have plans to keep the farm in the family.

There were several other strong associations in the pairwise, which included having good systems in place to manage farm data. A belief that reduced production in the short term

is worth longer-term benefits connected with a confidence in regenerative agriculture; reinvestment in the farm; and a wish to leave their land in an improved state. Also, having a level of comfort about uncertainty of returns or not knowing what is going to happen.

Using AIR EP for farming information combined with a strong personal responsibility to be part of a grower group and confidence in those groups had important links with wellbeing. Men and couples had higher levels of wellbeing than women who completed the survey (Both=5/5 Female=3.08/5 Male=3.55/5). Practices correlated with wellbeing were planting legumes and having deep-ripped more than four years before. Knowledge about practices that included soil moisture probes, environmental markets and land use pre-settlement was also important. Higher wellbeing linked with a smaller area of land having been lost to production due to soil issues. It also correlated with a belief that humans are not causing climate change.

Predisposition to trust

The modelling reduced farmer disposition to trust down to four linking factors, which were: a sense of wellbeing; peace with actions of neighbouring landholders; confidence we can adapt to climate change; and reducing the quantity of synthetic inputs on their farm. A second model extended these to a fifth item, the use of AIR EP as an important information source (R2=0.20).

A farmer view that most people were generally trustworthy linked with the following:

1. Wellbeing, coping well with the stresses of farm management (p=1.0E-07)
2. Confidence in their local grower group (p=6.9E-04), feeling supported in their farming activities; a sense of responsibility to participate (p=2.0E-04), and AIR EP as a top source of information that they value (2.2E-02) and trust to keep landholder interests in mind.
3. Confidence they can adapt to changing weather patterns, as well as being of a view that primary producers should do all they can to reduce carbon emissions and manage their farm in expectation of a highly variable climate.
4. Sense of belonging to a community; sharing the load working with a sibling on the farm; and a lack of issue with neighbours, as well as a positive perception of public support for their activities.
5. Working less hours and having the financial capacity to try new things.

This item correlated negatively with being the property manager rather than owner. It did not correlate with any values items. The only best-practice item it correlated positively with was having put up fences to manage stock access in the past.

5.4 RELATIONSHIPS BETWEEN ISSUES AND PRACTICE

The following table uses the statistical pairwise comparisons to understand relationships between practices and issues.

Table 15. Relationships between soil-related issues and best practices implemented as mitigation interventions in the past five years by landholders in the 2024 Eyre Peninsula Landholder Survey (n=X). Most of the correlations were positive with negative correlations identified in brackets.

Important issue	Management practice applied in past 5 years
Phosphorus availability in soils	*Testing of soils to understand soil condition* *Organics (Negative*)* *Use of precision farming techniques* *Use of no-tillage techniques*
Water-holding capacity of soils	*Use of precision farming techniques* *Planting legumes or pulses* *At least one lime application to arable land* *Maintaining at least 70% ground cover in non-drought years* *Preparation of a nutrient budget for all/most of the property* *Deep ripping*
Soil erosion (wind or water)	*Removal of an area of trees and shrubs (Negative)* *Organics (Negative)* *Encouraging native grasses/grains to grow at scale (Negative)* *Fencing of native bush/grasslands to manage stock access (Negative)* *Deep ripping*
Declining fertility/ nutrient status	*Organics (Negative)* *Preparation of a nutrient budget for all/most of the property*
Soil-borne diseases	*Use of precision farming techniques* *Organics (Negative)* *Testing of soils to understand soil condition*
Chemical residue in soils	*Preparation of a nutrient budget for all/most of the property*
Low level of organic carbon	*Fencing of native bush/grasslands to manage stock access (Negative)* *Carbon farming*
Low level of biological activity	*Carbon farming*
Soil salinity	*Organics (Negative)* *At least one lime application to arable land* *Preparation of a nutrient budget for all/most of the property* *Deep ripping* *Application of biological soil supplements (Negative)*
Soil sodicity	*Planting legumes or pulses* *Organics (Negative)* *Testing of soils to understand soil condition* *At least one lime application to arable land* *Preparation of a nutrient budget for all/most of the property* *Deep ripping*
Unintended impacts of soil amelioration strategies	*Organics (Negative)*

Soil acidity	*Organics (Negative)* *At least one lime application to arable land* *Preparation of a nutrient budget for all/most of the property* *Deep ripping*

* Note: a negative relationship means that farmers are less likely to implement a practice as the issue increases in important.

5.5 CLIMATE CHANGE

The results revealed that water-related concerns dominate landholders' perceptions of climate change impacts at the district level (Table 16.). Water security was the highest-ranked issue overall, with 86% of respondents rating it as important or very important. This concern was consistently high across all landholder types, with slight variation: full-time (86%), part-time (85%), hobby farmers (88%), and non-farmers (85%). Closely following was the availability and cost of water for livestock, which was deemed important by 80% of landholders overall, with particularly high concern among full-time (84%) and part-time (82%) farmers. These findings highlight a strong awareness of the vulnerabilities in water access and livestock management due to changing climatic conditions across the Eyre Peninsula, regardless of landholder type (historic weather patterns shown in Figure 26).

Other climate-related issues varied more noticeably by landholder type. The issue of uncertain returns limiting capacity to maintain or invest in property, while rated as important by 77% overall, was of much greater concern to full-time (83%) and part-time (82%) farmers compared to hobby farmers (46%) and non-farmers (43%). Similarly, changes in weather patterns and the impact of temperature extremes or changing rainfall on productivity were considered important by 70% and 68% of respondents respectively, with concern slightly higher among hobby farmers and non-farmers for these more general climate effects.

The results indicate that bushfire concern significantly outweighs flooding concern across all landholder types. Overall, 63% of respondents expressed worry about bushfire risks to life and property, with figures rising to 79% among hobby farmers and 74% among non-farmers. In contrast, only 19% of respondents overall were concerned about flooding, although hobby farmers (27%) and non-farmers (31%) showed somewhat higher levels of concern compared to full-time (17%) and part-time (22%) farmers, suggesting variability possibly linked to location or past experiences.

Despite the high bushfire concern, less than half of respondents reported having a disaster response plan in place, with only 39% indicating preparedness for events like bushfires or floods. Hobby farmers exhibited the highest preparedness rate (44%), followed by full-time farmers (45%) and part-time farmers (38%), while only 20% of non-farmers had a disaster response plan despite their high levels of concern about bushfires. This disparity underscores the need for enhanced disaster planning support across all landholder types, especially for non-farming residents, to bridge the gap between perceived risk and readiness.

Table 16. Importance of climate change related issues affecting local district farmers by landholder type and overall, for the 2024 Eyre Peninsula Landholder Survey (n=386-399). Means (out of 5) are given in brackets and orange shading highlights the top three issues by percentage, with the darkest shade reflecting the most important issue.

Climate change related issue	% Important / very important				
	Overall	Full-time	Part-time	Hobby Farmer	Non-Farmer
Water security	86% (4.4)	85%	85%	88%	85%
The availability/cost of water for livestock	80% (4.2)	84%	82%	79%	67%
~Uncertain returns limiting capacity to maintain/invest in my property	77% (4.1)	83%	82%	46%	43%
Changes in weather patterns	70% (3.9)	69%	69%	75%	78%
~Impact of temperature extremes and/or changing rainfall patterns on management/productivity	68% (3.8)	69%	65%	75%	58%
Risk to life and/or property from bushfires/wildfires	63% (3.8)	61%	63%	79%	74%
Risk to life and property from flooding	19% (2.3)	17%	22%	27%	31%
Do you have a disaster response plan prepared? (e.g. a flood or bushfire plan) (%Yes)	39%	44%	38%	45%	20%

~ Issues at the property scale

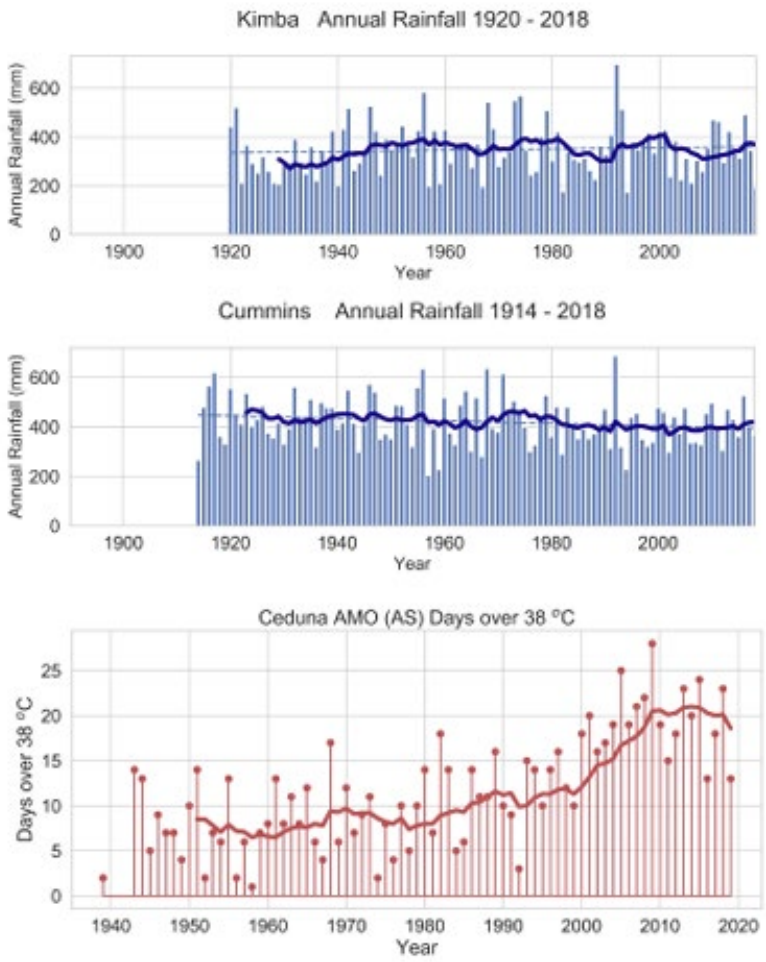

Figure 26. Trends in mean temperature and rainfall for the survey region. Accessed from BOM - www.bom.gov.au/climate/climate-guides/guides/046-Eyre-Peninsula-SA-Climate-Guide.pdf.

5.5.1 Changes to make farming systems more resilient

The survey responses indicate a divided perspective among landholders regarding the need for fundamental changes to make farming systems more resilient. Overall, only 30% of respondents agreed with the statement, but there was notable variation across groups: 55% of part-time farmers and 33% of hobby and non-farmers supported the need for significant reform, while only 24% of full-time farmers agreed. This suggests that those most embedded in agricultural production may either view existing practices as sufficient or see change as incremental rather than fundamental. Some explicitly rejected the premise, noting that "farming has already changed," citing technological advances such as minimum tillage and GM crop development.

Among those advocating for change, several common themes emerged. Many respondents emphasised moisture conservation, including the use of soil cover, green pastures, and summer weed control, as essential to building resilience in an increasingly variable climate. Revegetation, especially through the retention of native vegetation and the establishment of shelterbelts, was also commonly suggested to reduce erosion and enhance soil health. Others highlighted the need for improved water management strategies, such as investment in dams, subsoil moisture techniques, and better irrigation methods. Reducing reliance on synthetic inputs, particularly chemicals, and shifting

towards more sustainable, regenerative or holistic farming practices also featured prominently.

Infrastructure and systemic support were also highlighted as prerequisites for resilience. Several landholders called for financial incentives, including subsidies for innovative practices, equipment upgrades, and custodianship of marginal lands. The need for reliable weather forecasting, including local radar installations, was repeatedly emphasised to support decision-making. Some called for better connectivity, such as mobile and internet access, to enhance operational efficiency and information sharing. Market-based solutions were also mentioned, with calls for better commodity prices, lower freight charges, and a reduction in indirect taxes, all of which would improve farm viability and support the adoption of adaptive strategies.

In contrast, some respondents expressed scepticism or outright resistance to the idea of climate change or the need for structural change, viewing current shifts as part of natural long-term cycles. A small number of landholders dismissed scientific consensus, critiqued government interference, or attributed environmental concern to political agendas. Others expressed a sense of fatigue or frustration, noting the financial and logistical limitations of implementing systemic change. This range of views underscores the complexity of advancing resilience in farming systems, particularly in regions already grappling with marginal climates and market uncertainty.

5.5.2 Beliefs about climate change

Between the 2020 and 2024 EP surveys, landholder views on climate change remained relatively stable (Figure 27.). Agreement that human activities are influencing changes in climate held steady at 49% for all landholders, indicating no shift in perceptions of human impact. The belief that it is not too late to take action declined slightly from 52% to 48%, suggesting a small decrease in optimism about addressing climate change. Conversely, concern about the consequences of inaction increased marginally, with agreement that climate change will have dire consequences if nothing is done rising from 39% to 41%. Overall, the data suggest a consistent but cautious attitude toward climate change among respondents.

A strong regression model on the understanding that climate change is caused by human activity was closely linked with concerns about temperature extremes; having completed year 12, being of a view that landholders should do all they can to reduce emissions and manage their properties in expectation of a highly variable climate; and were highly concerned about biodiversity loss in the landscape (R2=0.46).

In the pairwise comparisons, this item correlated strongly with other climate concerns and a belief that farmers have a responsibility to mitigate their emissions and build on-farm resilience. It also links closely with strong biospheric values and concerns about environmental impacts, including from extreme weather and on biodiversity. It also corresponds with valuing data-driven decision-making and the view that applying a range of resilience-building practices such as planting perennial pastures, intensive grazing and applying biological amendments is worth the returns, with these respondents supportive of a regenerative agricultural approach. It corresponds with the use of the Eyre Peninsula Landscape Board, BOM, councils, universities and

environmental groups as information sources, via the mediums of radio, books and journal articles. Non-farmers were more likely to be of a view that the changing climate is attributed to human activities than farmers. This item links with a wish to sell the property within the next decade.

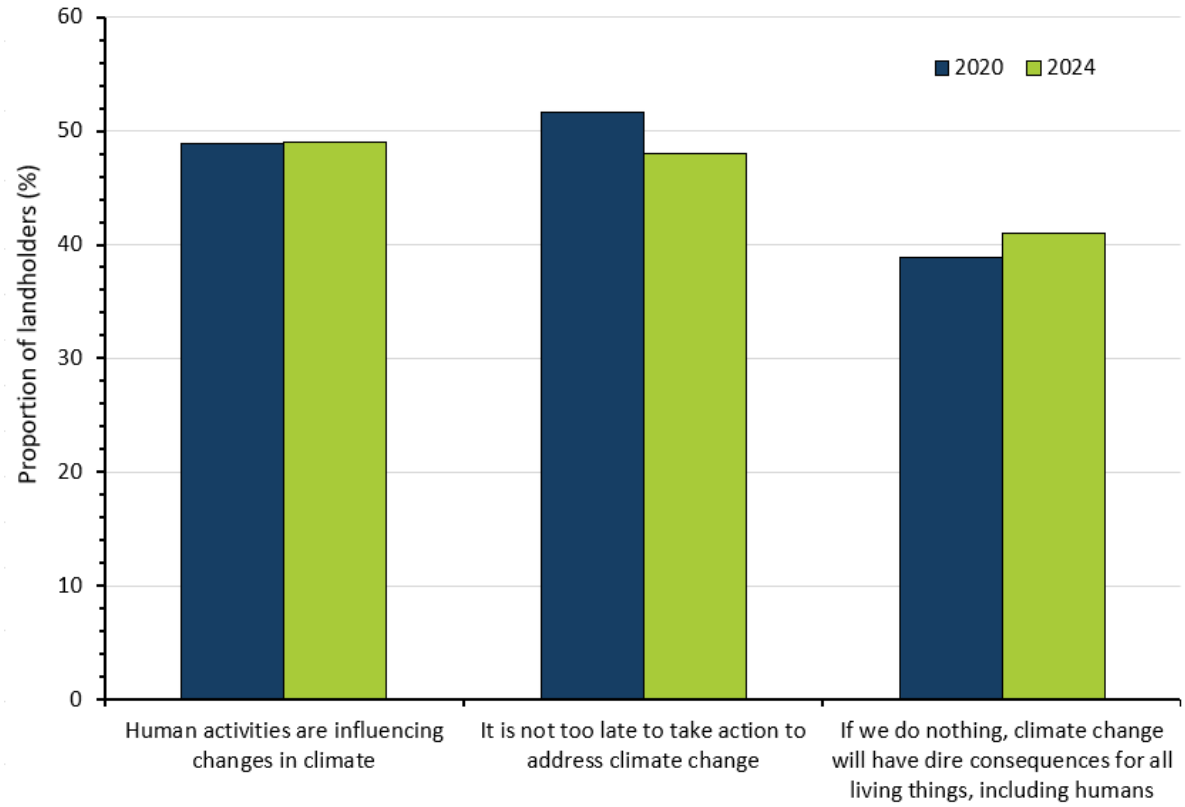

Figure 27. Beliefs about climate change overall for the 2020 (n=445-448) and 2024 (n= 372-378) Eyre Peninsula Landholder Survey years. Percentages reflect the proportion of landholders who agree or strongly agree with each.

The results reveal marked differences in perceptions of climate change across landholder types, with non-farmers and hobby farmers generally expressing higher levels of concern and support for action than full-time or part-time farmers (Figure 28.). For example, 66% of non-farmers and 55% of hobby farmers agreed that doing nothing will have dire consequences for all living things, compared to just 34% of full-time and 43% of part-time farmers. Similarly, belief that human activities are influencing changes in climate was highest among non-farmers (59%) and hobby farmers (57%), but lower among full-time (46%) and part-time (46%) producers. These trends suggest that those less directly engaged in day-to-day agricultural operations may be more attuned to mainstream climate discourse or more willing to support environmental action.

When it comes to emissions reduction, the gap between landholder types is even more pronounced. Only 26% of full-time farmers agreed that primary producers should do all they can to reduce carbon emissions, compared to 39% of part-time farmers, 33% of hobby farmers, and a significantly higher 65% of non-farmers. This disparity may reflect differing economic pressures, practical constraints, or ideological positions regarding the role of agriculture in climate mitigation. It may also point to a disconnect between broader

community expectations and the priorities of those directly responsible for food and fibre production.

Despite these differences, there is broader consensus on the importance of adapting to climatic variability. A majority of all groups agreed that landholders should manage their properties in expectation of a highly variable climate, with support highest among full-time farmers (66%) and non-farmers (63%). This indicates a shared recognition of changing seasonal conditions and the need for practical responses on the ground, even if there is less agreement about the causes or broader implications of climate change.

Views on the need for fundamental changes to farming systems were more polarised. Only 24% of full-time farmers supported this idea, compared to 55% of part-time farmers and 33% of hobby and non-farmers. This divergence may reflect differences in how landholders perceive the scale and feasibility of transformation within the agricultural sector. Overall, the findings highlight a nuanced landscape: while many landholders acknowledge climate variability and its risks, views differ significantly on the underlying causes, responsibility for mitigation, and the scale of change required.

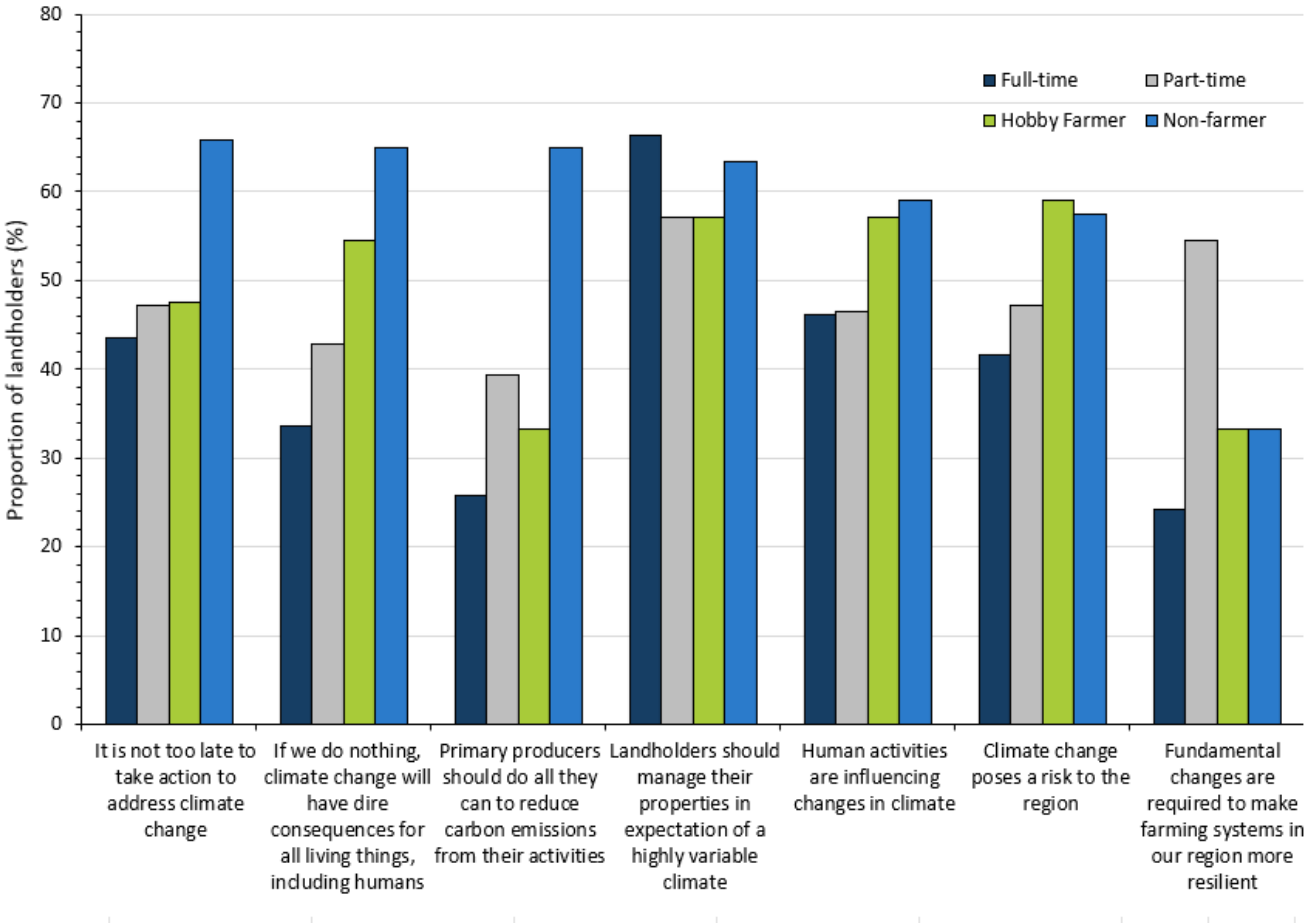

Figure 28. Beliefs about climate change by landholder type for the 2024 Eyre Peninsula Landholder Survey (n=163-378). Percentages reflect the proportion of landholders who agree or strongly agree with each statement.

5.5.3 Responding to climate change

The data suggests that practice change in response to climate change remains relatively limited, with only a minority of respondents reporting operational adaptations across key areas (Table 17.). Overall, 26% of landholders reported altering financial or on-property operations due to seasonal changes in weather, while a slightly higher 33% had made changes aimed at increasing soil carbon. In contrast, only 16% reported modifying operations specifically to reduce carbon emissions, suggesting that while climate adaptation is beginning to influence some management practices, mitigation-focused actions remain less common.

Differences by landholder type were notable. Full-time farmers consistently reported the highest levels of practice change, with 31% adjusting operations due to seasonal weather patterns, 38% implementing practices to increase soil carbon, and 18% responding to carbon emissions considerations. Part-time farmers followed similar trends, albeit at lower rates. In contrast, hobby and non-farmers were significantly less likely to report any form of climate-driven practice change, with only 18% and 9% respectively adjusting operations due to seasonal changes, and just 11% and 7% implementing soil carbon or emissions-related changes. These findings suggest that commercial scale and production focus are key drivers of climate-related innovation, with non-commercial landholders less engaged in adaptive or mitigation responses.

Table 17. Practice change in response to climate change by landholder type and overall, for the 2024 Eyre Peninsula Landholder Surveys (n=398-403).

Practice change	% Indicating 'yes'				
	Overall	Full-time	Part-time	Hobby Farmer	Non-Farmer
In the past 4 years, have you changed your financial or on-property operations as a result of seasonal changes in weather patterns?	26%	31%	24%	18%	9%
In the past 4 years, have you changed your operations to increase soil carbon on your property?	33%	38%	28%	23%	11%
In the past 4 years, have you changed your on-property operations as a result of considering opportunities to reduce carbon emissions?	16%	18%	12%	14%	7%

6. THE FUTURE OF FARMING ON THE EYRE PENINSULA

6.1 DIFFERENCES BY GENERATION

The data revealed generational differences in the adoption of agricultural management practices, with Generation Y- (born 1981 and later) and Generation X (born 1965–1980) showing generally higher engagement with modern and data-driven techniques compared to Baby Boomers+ and older cohorts (Figure 29). For example, the adoption of precision farming techniques rose through the generations from 40% among Baby Boomers+, 54% for Generation X, to 57% for Generation Y-. Similarly, soil testing and fertiliser planning were more widely implemented among younger cohorts, with 64% of Generation Y- testing soils and 71% preparing fertiliser plans, compared to 38% and 43%, respectively, for Baby Boomers+. This trend suggested a stronger orientation toward evidence-based and technologically informed land management among younger landholders.

Younger generations also showed higher engagement in practices associated with soil health. The application of lime to arable land was reported by 38% of Generation Y-, compared to just 15% of Baby Boomers+. Use of biological soil supplements followed the same pattern (14% Generation Y-, 4% Baby Boomers+). Deep soil amelioration practices such as deep ripping also became more prevalent, particularly among Generation Y- (45%) and Generation X (35%), compared to only 15% of Baby Boomers+. These figures indicated a growing awareness of soil condition and investment in soil improvement among younger farmers.

Environmental stewardship practices showed mixed generational uptake. While tree planting was relatively consistent across cohorts (23–38%), the removal of vegetation was most common among Generation Y- (20%), suggesting possible pressures related to expanding productivity or changing land use. In contrast, fencing off native vegetation to manage stock access was highest among Generation Y- (29%), reflecting a dual trend of both conservation and modification. Encouraging native grasses and grains was also slightly more common among younger respondents, indicating a modest but emerging interest in native species cultivation.

Regenerative practices such as sowing perennial pastures and using multi-species cropping were somewhat more common among younger generations. For instance, 70% of Generation Y- reported planting legumes, a notable increase from 43% of Baby Boomers+. Similarly, the use of integrated pest management was increasingly adopted across age cohorts, rising from 30% to 54%. However, adoption of more niche practices such as organic farming and carbon farming remained low across all age groups, with minimal differences observed. Overall, the data indicated a generational shift toward more diverse, technology-enabled, and ecologically attuned land management practices, especially among younger farmers.

Despite the observed trends, some practices show steady or minimal uptake across generations, such as strip 'n' disc farming systems and organic farming, suggesting these

methods remain specialised or limited in applicability. Notably, only a small proportion across all age groups identify their approach explicitly as regenerative, even though many of the practices reported, such as maintaining groundcover, minimising tillage, and using biological amendment, align with regenerative principles (as was found in Alexanderson et al., 2023). This may reflect a gap in terminology rather than practice, where farmers engage in regenerative actions without explicitly labelling them as such.

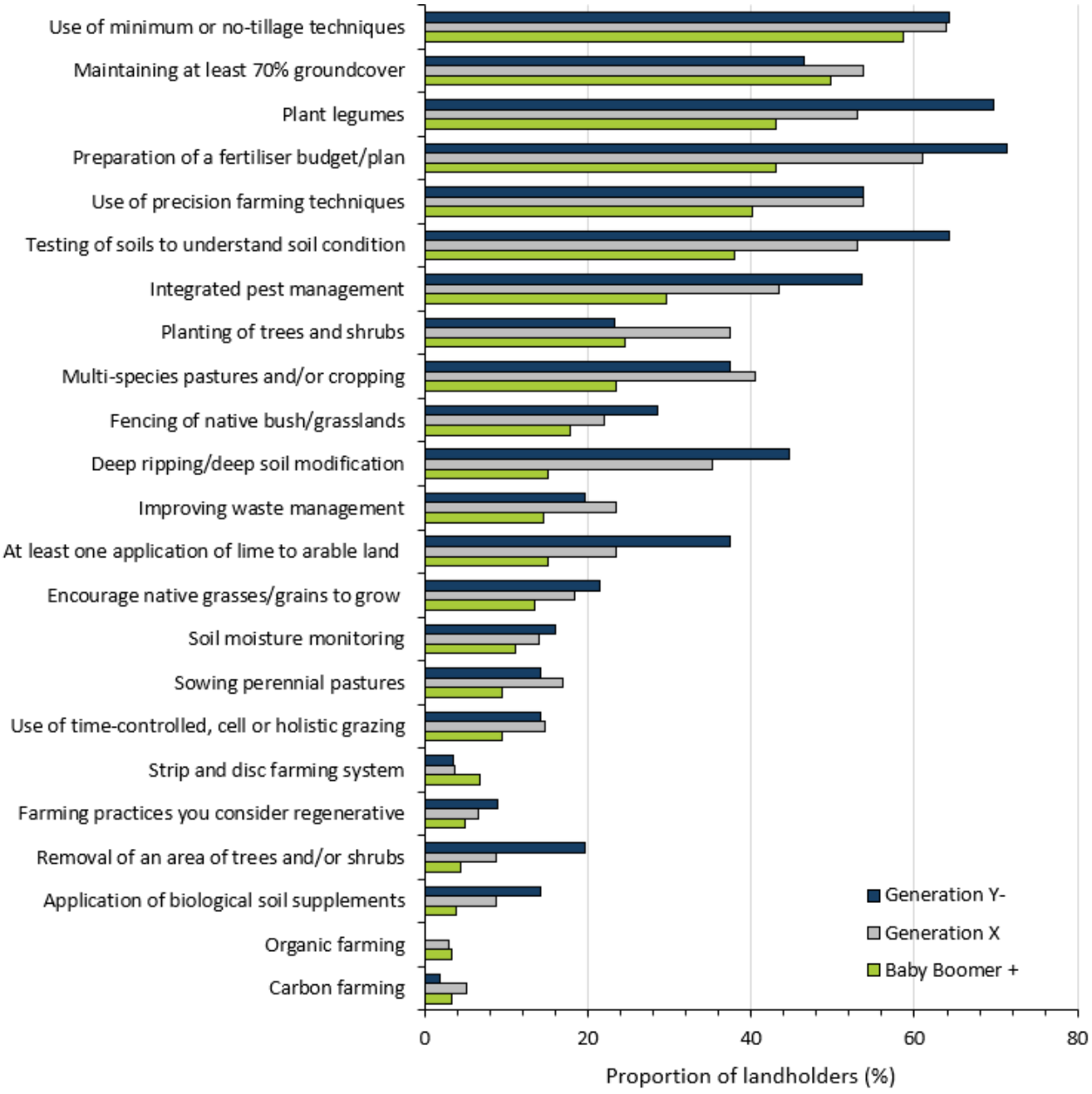

Figure 29. Management practices implemented in the past four years by generation for the 2024 Eyre Peninsula Landholder Survey (n=422).

The survey also reveals distinct generational patterns in self-assessed knowledge across a range of land management topics, with younger generations generally reporting greater familiarity with contemporary and technological approaches, while older generations tend to have stronger knowledge of traditional land-use practices (Figure

30.). For instance, confidence in preparing a property plan based on land class and soil characteristics increased significantly by generation, from 54% among Baby Boomers+ to 75% among Generation Y- +. Similarly, awareness of the EP soil moisture probe network showed a notable increase with age cohort, rising from 17% in the oldest group to 35% in the youngest. This suggests a growing integration of data-driven tools and planning approaches among younger landholders.

Conversely, older generations reported stronger knowledge in certain areas related to ecosystem services and land history. For example, 39% of Baby Boomers+ felt confident in understanding the role of remnant vegetation and understorey plants in supporting ecosystems, compared to only 20% of Generation Y-. A similar pattern was observed in knowledge about Aboriginal connections to land and pre-European land use, where Baby Boomers+ consistently reported higher awareness. These findings suggested that while younger generations engaged more with technological and production-focused innovations, they had less exposure to or emphasis on cultural heritage and ecological context.

In areas related to regenerative or sustainable grazing systems, Generation Y- again showed higher knowledge in newer management approaches. For example, 30% of Generation Y- felt confident in their understanding of time-controlled or holistic grazing strategies, compared to only 14% of Baby Boomers+. However, knowledge about holistic or regenerative agriculture overall remained low across all generations, with only 14–17% rating their understanding as sound or very sound. This indicated a general lack of widespread familiarity with these emerging paradigms, even though younger landholders appeared slightly more open to or engaged with them.

Knowledge of emerging or niche technologies, such as virtual fencing and nutrient-dense food production, also showed a modest but clear increase among younger generations. Confidence in understanding the potential of virtual fencing rose from 11% among older generations to 20% among Generation Y-, while knowledge of nutrient-dense farming practices was similarly higher among the youngest cohort (22% vs. 18% and 13% in older groups). This trend reflected younger farmers' greater exposure to innovation, digital tools, or alternative markets. Nonetheless, low knowledge levels across several key sustainability topics, such as carbon markets and native species management, suggested there remained a considerable need for targeted education and support across all generations to build capacity for future-facing land management.

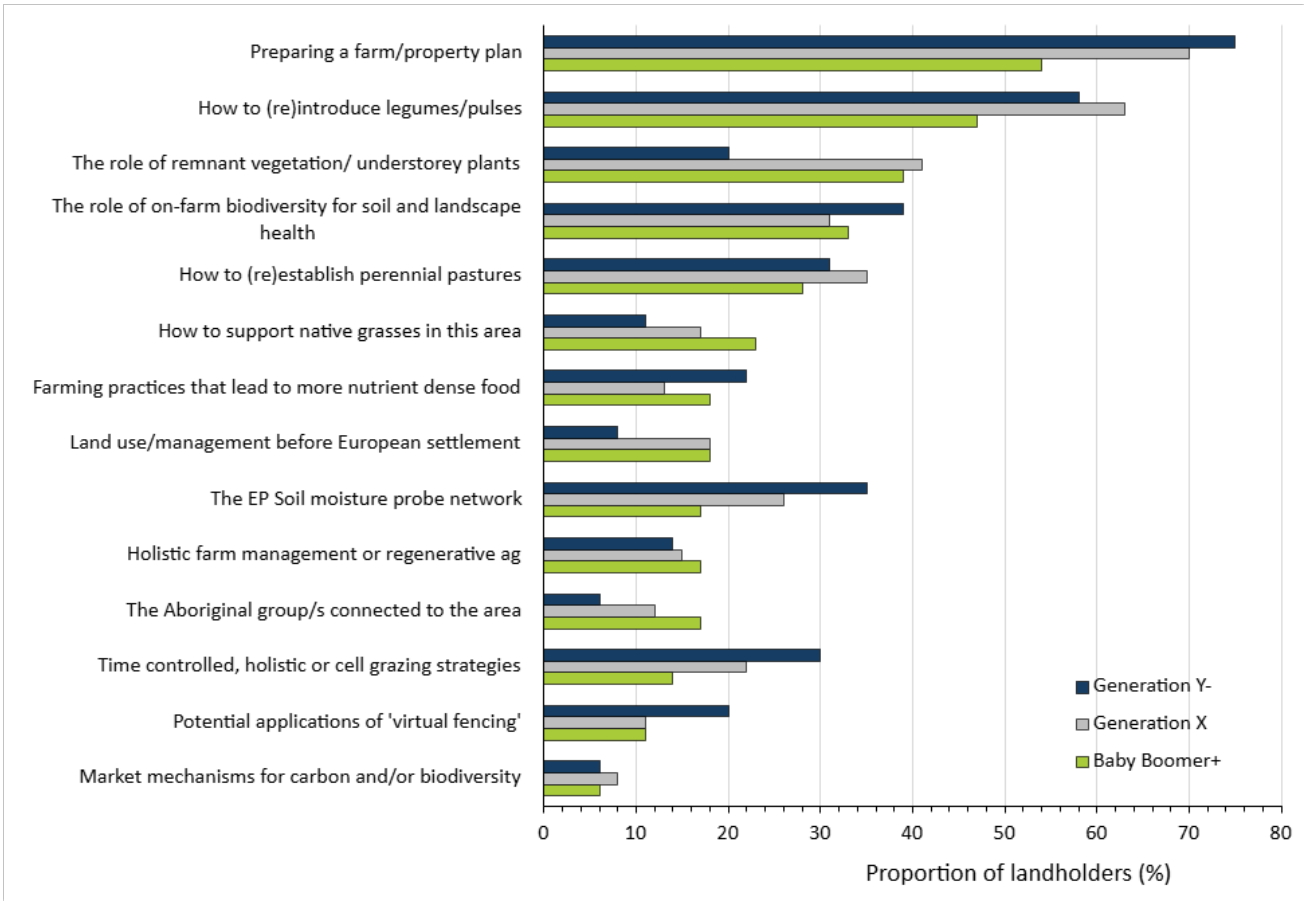

Figure 30. Landholder self-assessed knowledge by generation for the 2024 Eyre Peninsula Landholder Survey (n=338-399).

6.2 LONG-TERM PLANS

The survey revealed emerging trends in long-term planning among landholders, with a notable emphasis on investment and diversification (Table 18). Over half of respondents (54%) indicated they were likely to invest in their current landholding to boost productivity, reflecting a proactive approach to improving farm resilience. Diversification of enterprise mix to broaden income sources increased from 18% in 2020 to 24% in 2024, and a similar proportion (22%) expected a family member to seek off-farm work, highlighting an evolving strategy to manage financial pressures. Meanwhile, intentions to shift toward more intensive enterprises also rose (from 14% to 19%). Data collected in 2024 showed that 22% of landholders were likely to set aside part of their property for conservation, while 9% were considering buying land in other regions to cope with climatic variability.

Continuity in family ownership remained a consistent theme, with 78% of landholders in 2024 and 79% in 2020 expecting the property to remain within the family. However, there was a modest rise in those anticipating retirement-related transitions, with 37% likely to move off the property after retirement (up from 30% in 2020). Leasing or share farming arrangements continued to feature in long-term plans, with stable proportions expecting to lease additional land (24%) or lease/share farm all or most of their property (24%, up from 21%). Intentions to sell or subdivide remained low, with only 12% likely to sell the entire property and 8% expecting to subdivide and sell a large part, suggesting a

continued commitment to family-based or long-term land tenure models, despite shifting strategies for adaptation and resilience..

Table 18. Long-term plans of landholders by landholder type for the 2024 Eyre Peninsula Landholder Survey and overall, for the 2020 (n=420-440) and 2024 (n=361-387) survey years. Percentages reflect the proportion of landholders who designate each scenario as likely or highly likely in the next 10 years.

Long-term plans	% Likely / highly likely					
	Overall (2020)	Overall (2024)	Full-time (2024)	Part-time (2024)	Hobby Farmer (2024)	Non-Farmer (2024)
Ownership of the property will stay within the family	79% (4.2)	78% (4.2)	83%	65%	71%	70%
[1]Investing in the farm to increase the productive potential of my current landholding	NA	54% (3.2)	62%	48%	30%	17%
I will move off the property around/soon after reaching retirement age	30% (2.8)	37% (2.8)	44%	19%	31%	27%
Additional land will be purchased	32% (2.7)	29% (2.5)	37%	16%	11%	8%
All or most of the property will be leased or share farmed	21% (2.4)	24% (2.5)	19%	38%	11%	31%
Additional land will be leased or share farmed	23% (2.4)	24% (2.4)	31%	12%	5%	5%
The enterprise mix will be changed to diversify income sources	18% (2.6)	24% (2.6)	25%	23%	26%	8%
A family member will seek additional off-property work to support the farm	17% (2.4)	22% (2.5)	21%	31%	17%	19%
Some part of my property will be set aside for conservation purposes	20% (2.4)	22% (2.4)	16%	19%	30%	50%
The enterprise mix will be changed to more intensive enterprises	14% (2.4)	19% (2.5)	21%	16%	11%	8%
The property will be sold	14% (2.0)	12% (2.0)	9%	19%	10%	23%
Buying property outside of my current area to mitigate increased seasonal variability	8% (2.0)	9% (1.9)	9%	12%	0%	8%
The property will be subdivided and a large part of the property sold	6% (1.6)	8% (1.7)	7%	7%	5%	17%

[1] Question not included in both surveys or slight difference in wording between survey years - see appendix table X11

The 2024 Eyre Peninsula (EP) Landholder Survey revealed that half of all respondents (50%) reported having family members interested in taking over their property in the future, reinforcing the ongoing role of family succession in the region (Figure 31). However, 24% of landholders remained uncertain or believed it was too early to

determine future family involvement, underscoring the often-ambiguous nature of intergenerational transitions. A further 17% indicated that no family members were interested, while 9% deemed the question not applicable, suggesting a lack of direct family involvement or potentially alternative ownership or management models. These findings pointed to a complex and varied succession landscape, where interest and planning were unevenly distributed across the landholder population.

When analysed by landholder type, the data showed that full-time farmers were the most confident in securing intergenerational continuity, with 57% reporting family interest, substantially higher than the overall average. Hobby farmers (43%) and part-time farmers (38%) reported lower levels of interest, though hobby farmers still showed relatively strong engagement considering their non-commercial orientation. Non-farmers, however, indicated the least likelihood of family succession, with only 29% reporting interested family members and the highest proportion (34%) indicating no interest. The elevated "not applicable" responses among hobby farmers (14%) and non-farmers (13%) reflected more casual or investment-focused relationships with the land, where succession was not necessarily a central concern.

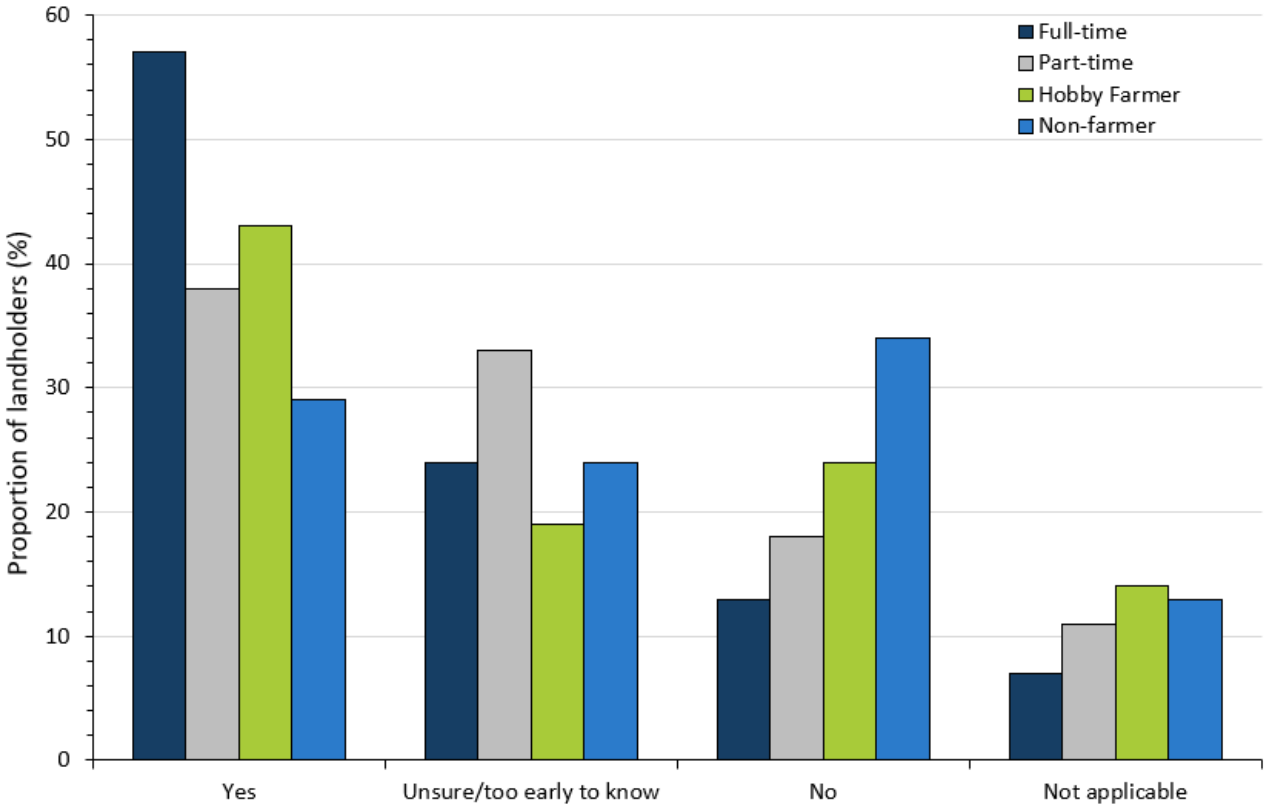

Figure 31. Family members interested in taking on the property in the 2024 Eyre Peninsula Landholder Survey (n=377).

Differences in the progress of succession planning were also marked between farmers and non-farmers (Figure 32). Among farmers, particularly full-time operators, there was stronger momentum towards formalised succession, with 34% (including 21% well advanced and 13% completed or ongoing) demonstrating significant planning progress. Only 15% of farmers reported that succession planning had not been initiated, suggesting that those with greater economic and operational ties to the land were more proactive in ensuring business continuity. Part-time farmers, while slightly less advanced in their

planning, also showed relatively high levels of early-stage engagement, pointing to a general awareness of the need for structured transitions within the farming community.

Conversely, non-farming landholders showed a much lower level of engagement with succession planning. Nearly half (48%) had not started planning, and only 7% reported completed or ongoing succession processes. This limited progression likely reflected the different roles these properties played in their lives, less as income-generating enterprises and more as lifestyle, recreational, or investment assets. The relatively low rates of both family interest and succession progress among non-farmers further indicated that these properties were more likely to change ownership outside family networks. These distinctions highlighted the need for differentiated support and communication strategies, ensuring that succession tools and resources were tailored to the unique needs and intentions of farming versus non-farming landholders.

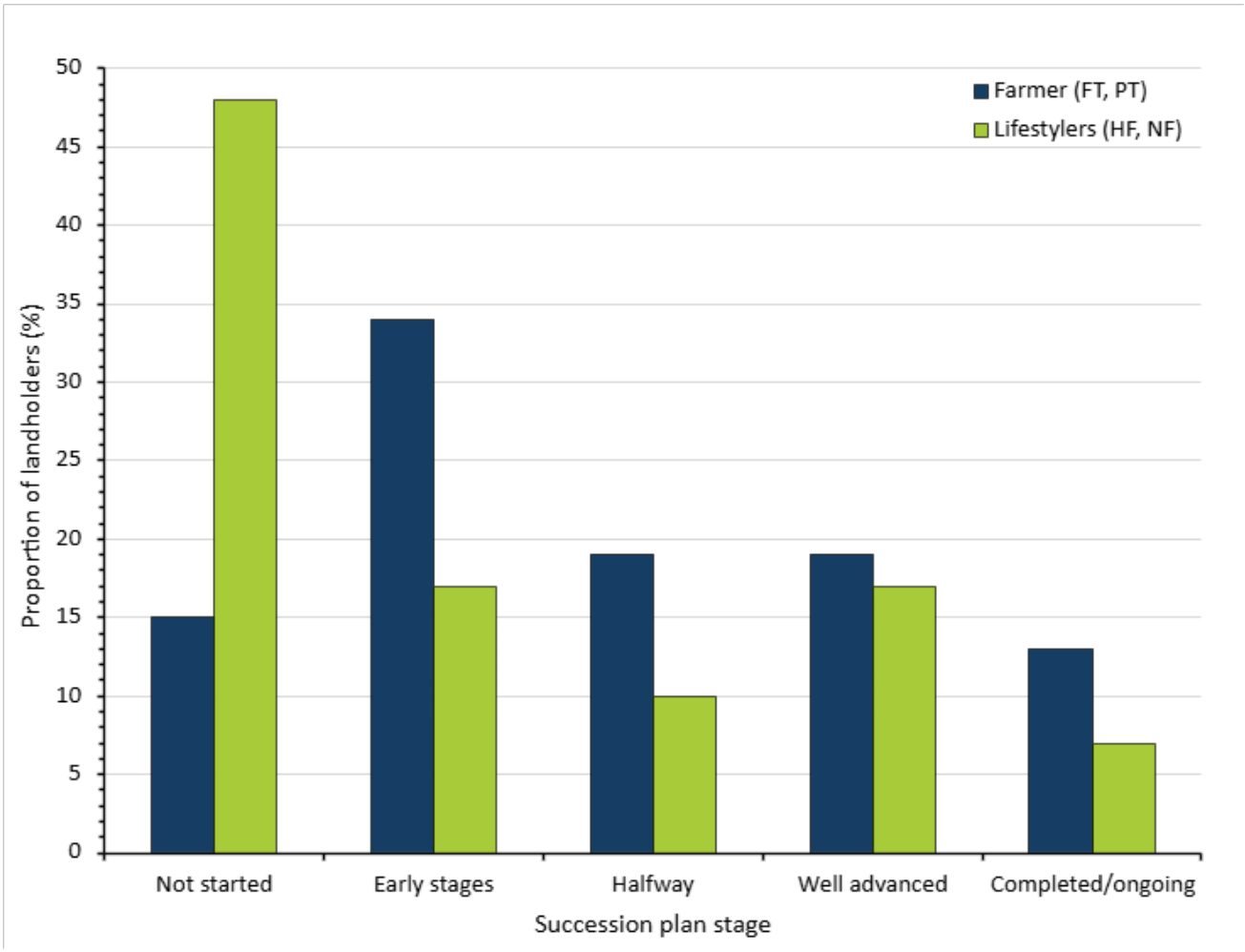

Figure 32. Progress of succession planning for farmers (full-time and part-time) and lifestylers (hobby and non-farmers) from the 2024 Eyre Peninsula Landholder Survey year (n=258).

A medium strength regression model showed that the most important factors linked with having a succession plan in place were: including multiple generations in decision-making; having good systems in place to manage farm data; working less hours on the farm per week; and being of a view that an important role of AIR EP is advocacy for farmers on the Eyre Peninsula (R2=0.26).

A significant proportion of respondents reported involvement of other family members in daily or weekly activities on their properties (Figure 33.). Overall, spouses or partners were the most commonly involved, with 42% of all respondents indicating their participation. This trend was particularly pronounced among full-time farmers, where 53% reported active involvement of their spouse or partner, highlighting the integral role of familial support in managing agricultural operations.

Looking at different landholder types, the survey reveals varying degrees of family involvement. Full-time farmers demonstrated the highest levels across all categories, with 39% involving children, 17% involving parents, and 12% involving siblings. In contrast, hobby farmers and non-farmers reported lower involvement from family members, reflecting potentially smaller scale or less intensive agricultural activities. This diversity underscores the nuanced dynamics of family engagement in agricultural enterprises across different landholder contexts.

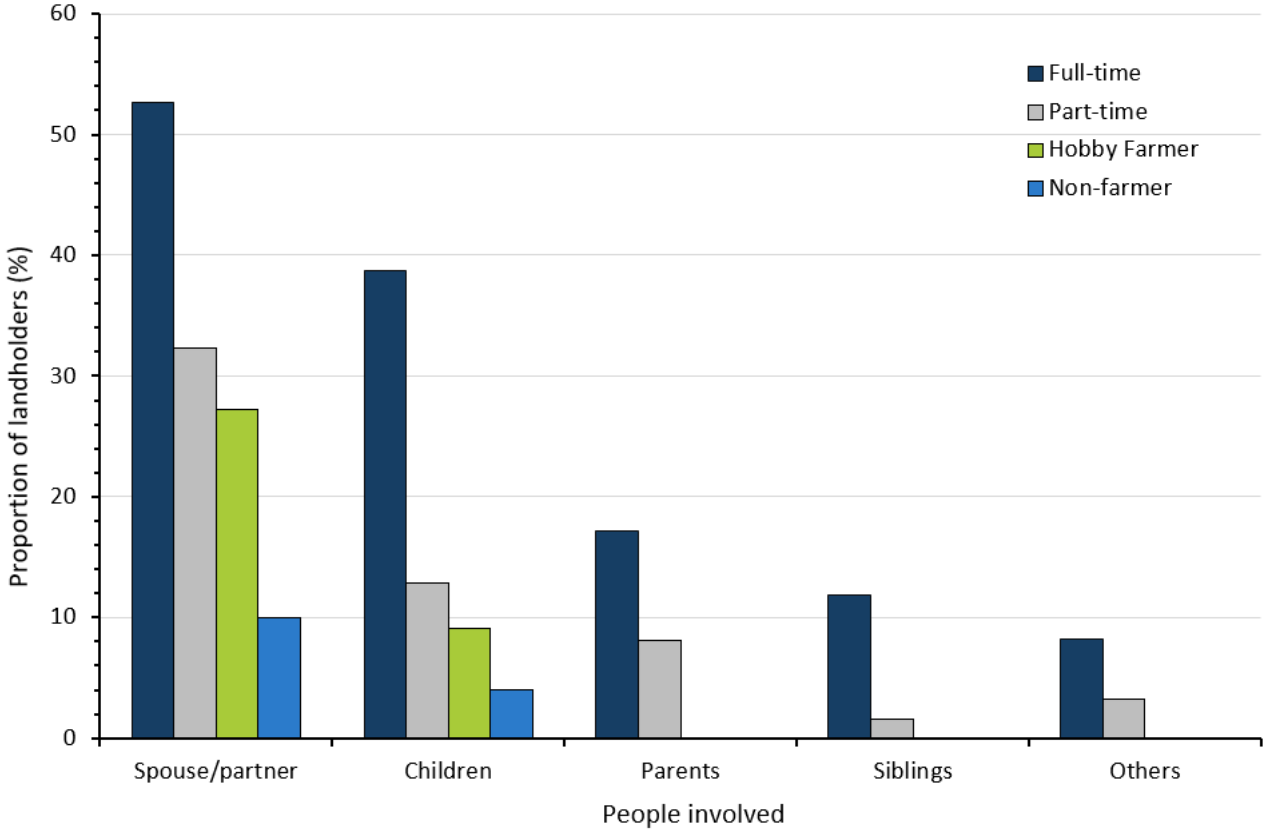

Figure 33. Proportion of landholders who have family members working on property on a daily or weekly basis at the time of the 2024 Eyre Peninsula Landholder Survey (n=401).

7. CONCLUSION

The 2024 Eyre Peninsula Landholder Survey yielded rich insights into the practices, values, and challenges of landholders across the region, providing a detailed understanding of how land management decisions were shaped by diverse goals and contexts. The survey confirmed the high level of engagement among full-time farmers in both economic and ecological dimensions of land stewardship, with strong alignment between productivity goals and environmental values. Part-time farmers demonstrated a balance between production and non-production goals, while hobby farmers and non-farmers showed stronger interests in conservation and lifestyle outcomes. These differences reflected the varied motivations shaping land use on the Eyre Peninsula and highlighted the importance of tailoring outreach and support initiatives accordingly.

A central outcome of the survey was the clear evidence of growing awareness and adoption of sustainable land management practices, particularly among commercial farmers. Soil testing, fertiliser budgeting, and minimum tillage were widely implemented, supported by a moderate uptake of precision agriculture. Interest in regenerative agriculture and carbon farming also emerged across landholder types, suggesting broadening concern for long-term soil health and resilience. However, confidence in some best-practice techniques had slightly declined since 2020, pointing to a need for increased information sharing and support as the operating environment became more complex.

Landholders reported modest improvements in their knowledge of ecological and land management issues, particularly in planning and vegetation management. Nevertheless, knowledge of more technical aspects, such as perennial pasture establishment and biological soil inputs, remained uneven, with full-time farmers consistently outperforming others. These findings indicated strong potential for knowledge uplift, especially among hobby and non-farming landholders who were increasingly custodians of rural land. Targeted extension, focused on technical training and cultural awareness, could have bridged these knowledge gaps and enhanced the overall capacity for land stewardship in the region.

Challenges facing Eyre Peninsula landholders remained significant. Water security dominated as the most widely shared concern, followed by financial constraints, climate variability, and regional service gaps. While full-time and part-time farmers tended to focus on agronomic and infrastructure issues, non-farmers and hobbyists expressed greater concern for ecological risks, including bushfire and biodiversity loss. Despite these differences, a shared recognition of environmental pressures underscored the potential for collective approaches to landscape-scale planning and adaptation.

Generational trends showed a promising shift towards innovation and long-term planning, with younger landholders more likely to adopt digital technologies, invest in property improvements, and engage in diversification. However, succession remained a key issue, with varying levels of preparedness depending on landholder type. Full-time farmers reported higher rates of planning and family involvement, whereas non-farmers often lacked formal succession processes. This suggested an opportunity for targeted

succession support programs that accounted for both commercial and lifestyle landholding patterns.

Decision-making across the region remained highly diverse. While many landholders operated independently, full-time farmers were more likely to engage in multi-generational and professionally supported planning. The growing complexity of farm operations and changing socio-economic conditions highlighted the importance of flexible decision-making structures that could support different landholder needs and capacities. Tailored support for strategic planning, particularly for non-commercial landholders, could have strengthened the region's overall resilience and preparedness.

In sum, the Eyre Peninsula survey demonstrated that landholders responded to environmental, economic, and social pressures with increasing awareness and strategic intent. While challenges persisted, there was strong potential for building on existing strengths, such as peer learning, regional collaboration, and adaptive practice adoption, to enhance the sustainability and viability of land management in the region. The data offered a solid foundation for policymakers, extension services, and research institutions to co-develop targeted, evidence-based initiatives that supported all landholders in navigating a rapidly changing landscape.

7.1 KEY RECOMMENDATIONS FROM THE 2025 EYRE PENINSULA SOCIAL BENCHMARKING REPORT

1. **Prioritise water security planning,** with 86% of landholders ranking water security as a top concern, invest in practice-change to boost resilience, including reducing risk margins, diversification of enterprises and drought contingency planning.

   Specifically, link water security planning directly with proven on-ground tactics that landholders identified as most profitable in dry years, which includes:

   A. **Dry sowing, early planting, and summer weed control** to maximise water-use efficiency and conserve soil moisture.

   B. **Soil amelioration** (delving, deep ripping, lime/clay application) to improve productivity on sandy soils.

   C. **Adaptive crop program management**, including lentil expansion, rotation planning, and crop selection shifts based on rainfall forecasts.

   D. **Variable rate fertiliser applications** and rate adjustments to optimise nutrient use and reduce costs in low-rainfall conditions.

   E. **Tactical livestock decisions** (destocking, containment feeding, timing of sales) to protect feed and water resources during drought.

   Programs should package these measures into **integrated "dry year" resilience plans** that combine water infrastructure investment with agronomic, soil, and livestock strategies shown to improve profitability in challenging seasons.

2. **Expand soil testing and interpretation support.** Despite 59% of full-time farmers testing soils, uptake is lower among other groups. Provide subsidised or group testing programs and workshops on interpreting results to address constraints

such as phosphorus availability, water-holding capacity, salinity, and erosion—issues affecting up to a third of farms (Lobry de Bruyn, 2019). Specifically, support the building of knowledge around nutrient management and fertiliser budgeting. Fertiliser planning rose markedly from 26% in 2020 to 65% among full-time farmers in 2024, but gaps remain. Extend training and digital tool access so more landholders can link nutrient management to profitability, soil health, and environmental stewardship.

3. **Continue to leverage peer-to-peer learning for practice change**. With 84% of farmers citing other farmers as a key information source, continue to support structured peer learning networks that showcase successful local adoption of desirable practices such as minimum/no-till, precision agriculture, legume integration, and regenerative practices (Leeuwis, 2013).
4. **Address disaster preparedness gaps**. Fewer than half of respondents have a disaster response plan, despite high concern about bushfire and drought. Facilitate community-level planning and provide property-level templates to improve readiness for climate extremes (Pike et al, 2024).
5. **Bridge generational knowledge gaps**. Younger farmers are strong adopters of precision ag and soil health practices but have lower knowledge of cultural and ecological topics (e.g. remnant vegetation role, Indigenous land use history). Develop cross-generational training and mentoring to retain both technical and ecological knowledge (Greenhalgh & Rawlinson, 2013; Leeuwis, 2013).
6. **Target support for land lost to productivity**. Nearly one-third of respondents report land degradation reducing productivity, particularly from salinity, magnesia patches, and erosion. Deliver targeted extension on remediation techniques and cost-sharing/fund initiatives for remedial infrastructure (fencing, revegetation, surface water management) (Leeuwis, 2013).
7. **Increase awareness and uptake of regenerative practices** Many landholders implement regenerative-aligned practices but do not identify with the term (Alexanderson et al., 2023). Promote regenerative farming benefits using language and examples familiar to farmers, linking to market opportunities such as carbon credits and biodiversity stewardship.

REFERENCES

Alexanderson, M. S., Luke, H., & Lloyd, D. J. (2024). "Regenerative agriculture in Australia: the changing face of farming." *Frontiers in Sustainable Food Systems* 8: 1402849.

Alexanderson, M. S., Luke, H., & Lloyd, D. J. (2023). Regenerative farming as climate action. Journal of environmental management, 347, 119063. https://doi.org/10.1016/j.jenvman.2023.119063

Axelrod, L. J. (1994). Balancing personal needs with environmental preservation: identifying the values that guide decisions in ecological dilemmas. *Journal of Social Issues*, 50(3), 85-104

Curtis, A., & Luke, H. (2019). *Social benchmarking for natural resource management:2019 North Central Victoria*. Southern Cross University, NSW, 2480.

Curtis, A. & De Lacy, T. 1998. Landcare, stewardship and sustainable agriculture in Australia. Environmental Values, 59-78.

de Groot, R., and Steg, L. (2007). Value orientations and environmental beliefs in five countries - validity of an instrument to measure egoistic, altruistic and biospheric value orientations. Journal of Cross-Cultural *Psychology*, 38(3), 318-332. https://doi.org/10.1177/0022022107300278

Greenhalgh, J. & Rawlinson, P. 2013. A Review of Mentoring in Agriculture: Another learning option for the next generation of New Zealand farmers? Extension Farming Systems Journal, 9, 75-81.

Groth, T. M., Curtis, A., Mendham, E., & Toman, E. (2014). Farmer identity in multifunctional landscapes: using a collective identity construct to explore the nature and impact of occupational identity. *Australian Geographer*, 45(1), 71-86

LEEUWIS, C. 2013. Communication for rural innovation: rethinking agricultural extension, John Wiley & Sons.

Lobry De Bruyn, L. A. 2019. Learning opportunities: Understanding farmers' soil testing practice through workshop activities to improve extension support for soil health management. Soil Use and Management, 35, 128-140.

Lockwood, M. (1999). Humans Valuing Nature: Synthesising Insights from Philosophy, Psychology and Economics. *Environmental Values,* 8(3),381-401.

Luke, H. (2025). Designing social surveys for understanding farming and natural resource management: A purposeful review of best-practice survey methods. *Land Use Policy,* 153, 107526. https://doi.org/10.1016/j.landusepol.2025.107526

Luke, H. (2017). Social resistance to coal seam gas development in the Northern Rivers region of Eastern Australia: Proposing a diamond model of social license to operate. *Land Use Policy,* 69, 266-280.

Luke, H., Baker, C., Allan, C. & McDonald, S. (2020). *Agriculture on the Eyre Peninsula: Rural Landholder Social Benchmarking Report 2020.* Southern Cross University, NSW, 2480.

McIntyre, N., Moore, J., & Yuan, M. (2008). A place-based, values centred approach to managing recreation on Canadian crown lands. *Society & Natural Resources,* 21, 657-670.

Pike, C. E., Lykins, A. D., Bartik, W., Tully, P. J. & Cosh, S. M. 2024. Climate Change in Rural Australia: Natural Hazard Preparedness and Recovery Needs of a Rural Community. Climate, 12, 57.

Stern, P. C., Dietz, T., Abel, T., Guagnano, G. A., & Kalof, L. (1999). A value-belief-norm theory of support for social movements: The case of environmentalism. *Human ecology review*, 81-97.

Whitelaw, A. (2025). "Farmer age is just a number, a growing one". 2025, from https://www.airr.com.au/2023/02/15/farmer-age-is-just-a-number-a-growing-one/?srsltid=AfmBOoo_S2ILav114vjnfpnLf_z-wAPXaQLfjVOs5m1GhDdyR4CyllrU.

APPENDIX 1 – DATA TABLES

X1. Key attributes of landholders in low rainfall and medium/high rainfall zones from the 2024 Eyre Peninsula Landholder Survey.

Key attributes	Low rainfall zone	Medium/High rainfall zone
RESPONDENT & FARM		
Farmer identity	70% full-time farmer	62% full-time farmer
Mean area owned on the Eyre Peninsula	3219ha	1645ha
Mean hours work on-property per week over last 12 months	45hrs	41hrs
Earnt income from agriculture on property in 2022/23 financial year (% Yes)	82%	81%
Received net profit from property in 2022/23 financial year (% Yes)	73%	70%
MANAGEMENT		
Enterprise mix – top 3	Cereals (84%), sheep (75%), pasture (61%)	Cereals (77%), sheep (71%), pasture (56%)
Top management practice implemented prior to 2020	Use of minimum or no-tillage techniques (59%)	Planting of trees and shrubs (60%)
Top management practice implemented in past 4yrs	Use of minimum or no-tillage techniques (66%)	Use of minimum or no-tillage techniques (55%)
Top management practice intending to implement in next 4-5yrs	Use of minimum or no-tillage techniques (51%)	Maintaining at least 70% groundcover (44%)
Soil moisture monitoring	13% prior to 2020, 17% last 4 yrs, 18% intent to implement	9% prior to 2020, 11% last 4 yrs, 16% intend to implement
Time frames considered when making strategic decisions	Up to 5 years (31%) and 6-20 years (22%)	Up to 5 years (36%) and year to year (25%)
Prepared/are preparing a property management or whole farm plan (% Yes)	46%	38%
Disaster response plan prepared (% Yes)	40%	39%
CHALLENGES		
Top issues at the local district scale (% Important / very important)	Water security (88%), absence of important services and infrastructure (86%), support for new and young farmers (83%)	Absence of important services and infrastructure (85%), water security (82%), availability/cost of water from livestock (78%)
Top issues for property owners (% Important / very important)	Rising input costs (90%), uncertain returns limiting capacity to maintain/invest	Rising input costs (89%), uncertain returns limiting capacity to maintain/invest

	in my property (79%), impact of weeds or pest animals on productivity (74%)	in my property (74%), impact of weeds or pest animals on productivity (70%)
Top soil-related issues for property owners (% Important / very important)	Phosphorus availability (72%), water-holding capacity (69%), soil erosion (66%)	Water-holding capacity (67%), phosphorus availability (61%), declining fertility/nutrient status (55%)
Landholders who have lost land to production due to soil problems (%Yes)	29% - 230ha mean	35% - 40ha mean
Risk to life and/or property from flooding*** (% Important / very important)	15%	22%
Risk to life and/or property from fires*** (% Important / very important)	56%	69%
CLIMATE VIEWS, KNOWLEDGE & ADAPTABILITY		
Confident landholders in the region can adapt to expected changes in rainfall (%Agree/strongly agree)	65%	68%
Believe landholders should manage their property in expectation of a highly variable climate	66%	65%
Satisfied with their farm's productivity given the seasonal conditions	65%	64%
Believe it is becoming more difficult to manage their farm in the face of increasing change and uncertainty.	64%	58%
Changed financial or on-property operations due to changes in weather patterns in the past 4 years (%Yes)	28%	26%
Considered buying property outside the area to mitigate increased seasonal variability (%likely/highly likely)	9%	8%

X2. Key attributes of full and part time farmers from the 2024 Eyre Peninsula Landholder Survey.

Key attributes	Full time	Part time
RESPONDENT & FARM		
Mean area owned on the Eyre Peninsula	3389ha	1323ha
Mean hours work on-property per week over last 12 months	55hrs	29hrs
Earnt income from agriculture on property in 2022/23 financial year (% Yes)	92%	85%
Received net profit from property in 2022/23 financial year (% Yes)	83%	59%
MANAGEMENT		
Enterprise mix – top 3	Cereals (95%), sheep (82%), pasture (70%)	Cereals (69%), sheep (66%), pasture (50%)
Top management practice implemented in past 4yrs	Use of minimum or no-tillage techniques (69%)	Use of minimum or no-tillage techniques (55%)
Top management practice intending to implement in next 4-5yrs	Use of minimum or no-tillage techniques (55%)	Use of minimum or no-tillage techniques/ Preparation of a fertiliser budget/plan for all/most of the property (42%)
Soil moisture monitoring	13% prior to 2020, 18% last 4 yrs, 23% intent to implement	6% prior to 2020, 6% last 4 yrs, 9% intend to implement
Time frames considered when making strategic decisions	Up to 5 years (35%) and year to year (25%)	Up to 5 years (34%) and year to year (23%)
Prepared/are preparing a property management or whole farm plan (% Yes)	52%	37%
Disaster response plan prepared (% Yes)	44%	38%
CHALLENGES		
Top issues at the local district scale (% Important / very important)	Absence of important services and infrastructure (93%), Water security (85%)	Water security (85%), Support for new and young farmers (84%)
Top issues for property owners (% Important / very important)	Rising input costs (98%), Uncertain returns limiting capacity to maintain/invest in my property (83%)	Rising input costs (89%), Uncertain returns limiting capacity to maintain/invest in my property (82%),
Top soil-related issues for property owners (% Important / very important)	Water-holding capacity (75%), Phosphorus availability (70%)	Water-holding capacity (71%), phosphorus availability (70%)

Landholders who have lost land to production due to soil problems (%Yes)	40% - 145ha mean	17% - 23ha mean
Risk to life and/or property from flooding*** (% Important / very important)	17%	22%
Risk to life and/or property from fires*** (% Important / very important)	61%	63%
CLIMATE VIEWS, KNOWLEDGE & ADAPTABILITY		
Confident landholders in the region can adapt to expected changes in rainfall (%Agree/strongly agree)	72%	67%
Believe landholders should manage their property in expectation of a highly variable climate	66%	57%
Satisfied with their farm's productivity given the seasonal conditions	78%	52%
Believe it is becoming more difficult to manage their farm in the face of increasing change and uncertainty.	68%	59%
Changed financial or on-property operations due to changes in weather patterns in the past 4 years (%Yes)	31%	24%
Considered buying property outside the area to mitigate increased seasonal variability (%likely/highly likely)	9%	12%

Table X3. Land use and enterprise mixes for all landholders across the 2020 (n=474-476) and 2024 (n=433) Eyre Peninsula Landholder Survey years. Means (out of 5) are given in brackets and percentages reflect the proportion of landholders engaging with each land use or enterprise at the time of the survey. Note: cropping was not split into subcategories in 2020.

Land use / enterprise type	% Yes (2020)	% Yes (2024)
[1] Cereals	NA	79%
[1] Sheep	62%	72%
Pasture	54%	57%
[1] Legumes/pulses	NA	43%
Area of remnant native vegetation (e.g. trees, grasslands, wetlands)	36%	39%
[1] Oil seeds	NA	30%
Area set aside for living/recreation (e.g. gardens, pets, ocean access)	20%	22%
[1] Other tree planting (e.g. shelter, habitat, erosion or recharge control, carbon)	21%	20%
Beef cattle	9%	11%
Heritage agreement/covenant	13%	11%
[1] Bee keeping	NA	3%
Other commercial livestock enterprises (e.g. poultry, goats, pigs, deer, horses, alpaca, dogs)	3%	3%
Farm-based tourism (e.g. farm stays, B&B)	2%	2%
Dairying	0%	1%
Viticulture	0%	1%
Horticulture	2%	1%
Irrigated agriculture	3%	1%
Farm forestry	2%	1%
[1] Cropping	79%	NA

[1] Question not included in both surveys or slight difference in wording between survey years - see appendix table X11

Table X4. Overall proportion of landholders who agree or strongly agree with views and experiences statements for the 2020 (n=429-452) and 2024 (n=375-397) Eyre Peninsula Landholder Surveys. Means (out of 5) are given in brackets.

View and experience statements	% Agree / strongly agree					
	Overall (2020)	Overall (2024)	Full-time (2024)	Part-time (2024)	Hobby Farmer (2024)	Non-Farmer (2024)
I feel a personal responsibility to maintain the productive capacity of my soil	91% (4.4)	90% (4.4)	94%	93%	94%	64%
[1] I'm confident that my land is in better condition than when I took on the management of this farm	NA	85% (4.3)	88%	92%	76%	62%
The benefits of stubble retention outweigh problems arising from the practice	84% (4.3)	79% (4.3)	90%	76%	44%	44%
[1] Soil testing is an essential step in understanding soil condition	83% (4.2)	78% (4.1)	82%	87%	79%	44%
Biological activity is an important indicator of the productive capacity of soils	81% (4.2)	76% (4.1)	78%	77%	78%	60%
[1] Fencing to manage stock access is an essential element of protecting waterways, soil and native vegetation	85% (4.2)	75% (4.2)	71%	81%	89%	79%
[1] I'm confident that landholders in this region can adapt to expected changes in rainfall patterns	69% (3.9)	66% (3.8)	72%	67%	70%	33%
[1] Most years I'm satisfied with my farm's profitability given the seasonal conditions experienced	61% (3.6)	65% (3.7)	78%	52%	45%	17%
[1] Reduced production in the short-term is justified where there are long term benefits	NA	63% (3.7)	64%	67%	75%	44%
[1] It is becoming more difficult to manage my farm in the face of increasing change and uncertainty	NA	60% (3.7)	68%	59%	33%	30%
Grower groups are the best way to drive and direct local research, development and extension	66% (3.9)	58% (3.7)	67%	51%	17%	43%
I am coping well with the associated stresses and challenges of managing my farm	70% (3.9)	57% (3.5)	63%	62%	50%	19%
[1] Internet or mobile phone access is a barrier to finding/using information for my farm management	NA	56% (3.7)	65%	48%	25%	33%
[1] Decision-making needs to be strongly influenced by data/scientific evidence	NA	56% (3.6)	56%	56%	61%	51%

[1] I am confident planning long-term nitrogen strategies (balancing costs, risks and expected benefits)	NA	55% (3.7)	66%	51%	12%	19%
[1] The cost of deep-tillage and subsoil modification are justified by the benefits	48% (3.7)	51% (3.7)	61%	42%	17%	26%
I have good systems in place to manage my farm data	53% (3.5)	51% (3.5)	63%	37%	22%	12%
I feel adequately supported to conduct farming and land management activities on my property	59% (3.7)	50% (3.4)	59%	42%	28%	21%
[1] Intensive grazing for short periods is usually better than set stocking	NA	45% (3.6)	43%	64%	56%	24%
[1] I feel a personal responsibility to be part of a local grower group (for research and development)	40% (3.4)	43% (3.4)	53%	28%	17%	26%
[1] The costs of applying lime to balance soil acidity is justified by increased production	43% (3.8)	40% (3.7)	43%	49%	28%	21%
[1] I am interested in learning more about regenerative/holistic farming approaches	40% (3.3)	40% (3.3)	40%	37%	61%	33%
[1] I'm confident that adopting regenerative/holistic farming practices is justified by the returns	NA	33% (3.3)	31%	33%	44%	29%
The costs of establishing perennial pastures are justified by the returns	43% (3.7)	32% (3.4)	32%	43%	28%	19%
[1] Overall, I am decreasing my use of synthetic fertiliser/pesticide inputs per hectare	NA	20% (2.7)	13%	35%	33%	20%
[1] There is adequate compensation or support provided for good land/soil stewardship	23% (2.8)	15% (2.6)	13%	28%	6%	10%

[1] Question not included in both surveys or slight difference in wording between survey years - see appendix table X11

Table X5. Management practices implemented sometime in the past four years by landholder type for the 2024 Eyre Peninsula Landholder Survey and overall, for the 2020 (n=464-466) and 2024 (n=422) surveys. Note, 2020 data is assessed over a five-year period.

Management practice	% Implemented sometime in past 4 years					
	Overall (2020)	Overall (2024)	Full-time (2024)	Part-time (2024)	Hobby Farmer (2024)	Non-Farmer (2024)
[1] Use of minimum or no-tillage techniques	44%	59%***	69%	55%	39%	22%
[1] Preparation of a fertiliser budget/plan for all/most of the property	21%	51%#	65%	45%	9%	11%
[1] Maintaining at least 70% groundcover (in non-drought years)	NA	47%	53%	53%	22%	22%
[1] Plant legumes (e.g. lucerne, clover, medics, pulses)	42%***	47%#	60%	39%	13%	11%
[1] Testing of soils to understand soil condition	40%[1]	45%#	59%	38%	13%	4%
Use of precision farming techniques	39%	45%#	57%	34%	17%	16%
Planting of trees and shrubs (incl. direct drilling)	31%	28%# ***	28%	27%	22%	24%
[1] Integrated pest management	NA	35%#	46%	22%	13%	9%
[1] Deep ripping or other deep soil modification/amelioration methods	25%	26%#	36%	13%	4%	2%
[1] Multi-species pastures and/or cropping	NA	29%#	35%	28%	22%	9%
[1] Improving waste management practices on my property	NA	18%	23%	13%	4%	2%
At least one application of lime to arable land	16%***	20%#***	25%	22%	17%	2%
Fencing of native bush/grasslands to manage stock access	26%	19%***	18%	25%	17%	22%
[1] Soil moisture monitoring (e.g. moisture probe)	NA	13%	18%	6%	0%	0%
[1] Encourage/manage native grasses/grains to grow at scale	NA	15%	15%	22%	9%	9%
Sowing perennial pastures	23%***	12%	15%	13%	0%	4%
[1] Use of time-controlled, cell or holistic grazing	24%	11%	12%	14%	4%	11%
[1] Carbon farming	NA	4%	4%	5%	4%	7%

Farming practices you consider to be regenerative.	12%	6%***	8%	5%	9%	0%
[1] Application of biological soil supplements (e.g compost-tea, effluent)	25%***	6%#	7%	9%	9%	0%
[1] Strip and disc farming system	NA	5%	6%	3%	0%	2%
[1] Removal of an area of trees and/or shrubs	NA	8%#	8%	11%	9%	7%
[1] Organic farming	6%	2%	2%	3%	4%	0%

[1] Question not included in both surveys or slight difference in wording between survey years - see appendix table X11

*** Significant difference by rainfall zone (2020 was assessed using low, medium and high rainfall zones while 2024 was assessed using low and medium/high amalgamated). # Significant difference by generation (2024 only)

Table X6. Management practices implemented overtime by landholders overall for the 2024 Eyre Peninsula Landholder Survey (n=421-422) and the 2020 (n=463-466) survey. Note, 2020 data is assessed over a five-year period and 2024 data is assessed over a 4-year period.

Management practice	Previous to last 4/5 years		Past 4 years		Intend to implement	
	2020	2024	2020	2024	2020	2024
Planting of trees and shrubs (incl. direct drilling)	64%	52%***#	31%	28%***#	28%	29%***#
[1] Removal of an area of trees and/or shrubs	NA	19%	NA	8%#	NA	5%
Fencing of native bush/grasslands to manage stock access	48%	37%	26%	19%***	16%	18%#
[1] Use of time-controlled, cell or holistic grazing	16%***	10%#	24%	11%	17%	11%#
Sowing perennial pastures	20%	20%	23%***	12%	18%	13%***
[1] Use of minimum or no-tillage techniques	42%	54%	44%	59%***	24%	45%#
Use of precision farming techniques	29%	37%#	39%	45%#	22%	38%#
At least one application of lime to arable land	13%***	19%***	16%***	20%***#	12%***	19%***#
[1] Application of biological soil supplements (e.g compost-tea, effluent)	26%***	7%	25%***	6%#	21%	6%
[1] Maintaining at least 70% groundcover (in non-drought years)	NA	38%	NA	47%	NA	40%
[1] Testing of soils to understand soil condition	NA	43%#	NA	45%#	NA	39%#
[1] Preparation of a fertiliser budget/plan for all/most of the property	16%***	46%#	21%	51%#	20%	43%#
[1] Plant legumes (e.g. lucerne, clover, medics, pulses)	37%***	47%#	42%***	47%#	26%	40%#
[1] Carbon farming	NA	3%	NA	4%	NA	7%
[1] Organic farming	5%***	4%	6%	2%	7%	3%
[1] Multi-species pastures and/or cropping	NA	23%#	NA	29%#	NA	24%#
[1] Integrated pest management	NA	31%	NA	35%#	NA	28%#
[1] Encourage/manage native grasses/grains to grow at scale	NA	13%	NA	15%	NA	15%

[1] Improving waste management practices on my property	NA	13%	NA	18%	NA	20%#
[1] Strip and disc farming system	NA	6%	NA	5%	NA	6%
[1] Deep ripping or other deep soil modification/amelioration methods	18%	22%	25%	26%#	19%	28%#
[1] Soil moisture monitoring (e.g. moisture probe)	NA	11%	NA	13%	NA	17%
Farming practices you consider to be regenerative.	9%	4%	12%	6%***	12%	7%

[1] Question not included in both surveys or slight difference in wording between survey years - see appendix table X11

*** Significant difference by rainfall zone (2020 was assessed using low, medium and high rainfall zones while 2024 was assessed using low and medium/high amalgamated).# Significant difference by generation (2024 only)

Table X7. Most important issues overall at the local district and property scale identified in the 2020 (n=289-463) and 2024 (n=324-399) Eyre Peninsula Landholder Surveys. Means (out of 5) are given in brackets and percentages reflect the proportion of landholders that designate each issue as important or very important.

Important Issues	% Important / very important					
	Overall (2020)	Overall (2024)	Full-time	Part-time	Hobby Farmer	Non-Farmer
LOCAL						
Water security	81% (4.3)	86% (4.4)	85%	85%	88%	85%
[1] Absence of important services and sufficient infrastructure (e.g. phone, schools, internet, childcare, healthcare, roads, BOM radar).	79% (4.3)	85% (4.4)	93%	74%	83%	53%
[1] The availability/cost of water for livestock	67% (4.0)	80% (4.2)	84%	82%	79%	67%
Support for new and young farmers	72% (4.1)	79% (4.1)	84%	84%	67%	63%
[1] Declining soil health and/or soil productivity	NA	73% (4.0)	70%	82%	67%	78%
Changes in weather patterns	65% (3.9)	70% (3.9)	69%	69%	75%	78%
[1] Risk to life and/or property from bushfires/wildfires	48% (3.4)	63% (3.8)	61%	63%	79%	74%
[1] Public opposition for agricultural practices (e.g. GMs, animal welfare, pesticide use)	67% (3.9)	61% (3.6)	67%	52%	54%	43%
[1] The impact of pest plants and/or animals on native plants and animals (biosecurity threats)	56% (3.6)	59% (3.7)	57%	59%	54%	76%
Loss of native plants and animals in the landscape	43% (3.3)	53% (3.5)	47%	50%	75%	76%
[1] Long-term negative impacts of properties purchased by absentees	43% (3.3)	43% (3.3)	46%	34%	35%	26%
[1] Land use change/conflicting land use (e.g. solar, mining, residential, carbon farming) impacting/ encroaching on farmland	32% (2.9)	42% (3.3)	46%	35%	39%	37%
[1] Risk to life and/or property from flooding	NA	19% (2.3)	17%	22%	27%	31%
PROPERTY LEVEL						
[1] Rising input costs	NA	89% (4.5)	98%	89%	63%	54%
[1] Uncertain returns limiting capacity to maintain/invest in my property	~58% (3.8)	77% (4.1)	83%	82%	46%	43%
[1,2] The impact of weeds or pest animals (including overabundant native species) on productivity	~57% (3.6)	72% (3.9)	75%	70%	50%	68%

[1] Weed/pest resistance to herbicides, pesticides and/or fungicides	~59% (3.8)	68% (3.9)	75%	58%	52%	61%
[1] Impact of temperature extremes and/or changing rainfall patterns on management/productivity	NA	68% (3.8)	69%	65%	75%	58%
[1] Lack of skilled labour to undertake on-property work	NA	58% (3.5)	68%	43%	38%	37%
[1] The activities of neighbouring landholders (e.g. overspray, building dams, neglect)	NA	41% (3.1)	34%	46%	70%	49%
SOIL-RELATED ISSUES AT THE PROPERTY LEVEL						
[1] Water-holding capacity of soils	NA	69% (3.9)	75%	71%	61%	41%
[1] Phosphorus availability in soils	53% (3.6)	66% (3.8)	73%	70%	39%	36%
Soil erosion (e.g. due to wind or water)	68% (3.9)	61% (3.7)	65%	56%	50%	54%
[1] Declining fertility/nutrient status of soils, therefore increased inputs required	57% (3.6)	55% (3.6)	60%	54%	50%	36%
Chemical residue in soils	56% (3.7)	55% (3.5)	58%	59%	39%	44%
Low level of biological activity in soils	63% (3.8)	53% (3.5)	53%	53%	54%	43%
Low levels of organic carbon in soils	57% (3.7)	51% (3.4)	54%	50%	54%	35%
Soil-borne diseases	56% (3.6)	50% (3.4)	53%	45%	42%	44%
[1] Salinity (e.g. magnesia patches, Mallee seeps) undermining productive capacity of soils	~38% (3.2)	45% (3.2)	50%	41%	29%	33%
[1] Soil sodicity undermining productive capacity of soils	39% (3.2)	44% (3.2)	47%	46%	41%	33%
Soil acidity (lower pH) undermining productive capacity of soils	37% (3.2)	39% (3.0)	43%	43%	38%	18%
[1] Unintended impacts of previous soil amelioration strategies	29% (3.0)	34% (2.9)	36%	39%	30%	26%

[1] Question not included in both surveys or slight difference in wording between survey years - see appendix table X11

[2] In 2020 this question was split into two questions assessing (1) the impact of weeds or over-abundant native plant species and (2) the impact of feral animals or over-abundant native animal species on productivity

~ Assessed at the local district scale

Table X8. Views and beliefs about climate change and associated actions taken by landholders identified in the 2020 (n=404-452) and 2024 (n=163-403) Eyre Peninsula Landholder Surveys. Means (out of 5) are given in brackets.

Climate change statement	% of Landholders	
	Overall (2020)	Overall (2024)
VIEWS (% Agree / strongly agree)		
[1] I'm confident that landholders in this region can adapt to expected changes in rainfall patterns	69% (3.9)	66% (3.8)
Primary producers should do all they can to reduce carbon emissions from their activities.	50% (3.5)	34% (3.1)
[1] Landholders should manage their properties in expectation of a highly variable climate	NA	65% (3.7)
Fundamental changes are required to make farming systems in our region more resilient	40% (3.3)	30% (3.2)
BELIEFS (% Agree / strongly agree)		
Climate change poses a risk to the region	43% (3.3)	46% (3.4)
Human activities are influencing changes in climate	49% (3.4)	49% (3.4)
It is not too late to take action to address climate change	52% (3.6)	48% (3.5)
If we do nothing, climate change will have dire consequences for all living things, including humans	39% (3.2)	41% (3.2)
ACTIONS (%Yes)		
[1] Changed on-property operations as a result of seasonal changes in weather patterns	27% last 12 months	26% last 4 years
[1] Changed your operations to increase the soil carbon on your property	28% last 12 months	33% last 4 years
[1] Changed your on-property operations as a result of considering opportunities to reduce carbon emissions	24% last 12 months	16% last 4 years

[1] Question not included in both surveys or slight difference in wording between survey years - see appendix table X11

Table X9a. Modes of information used by landholder type for the 2024 Eyre Peninsula Landholder Survey and overall, for the 2020 (n=460-462) and 2024 (n=408-410) survey years. Percentages reflect the proportion of landholders that used each mode in the last 12 months.

Mode of information	% Indicating 'yes'						
	Overall (2020)	Overall (2024)	FT (2020)	FT (2024)	PT (2024)	HF (2024)	NF (2024)
Field days	56%	53%	71%	62%	52%	24%	24%
Websites	54%	46%	60%	51%	43%	32%	35%
Newspapers	53%	42%	63%	47%	47%	28%	17%
Emails	49%	40%	63%	48%	36%	24%	15%
Brochures/leaflets/ newsletters	37%	34%	46%	41%	28%	16%	11%
Magazines	49%	32%	61%	34%	29%	32%	15%
[1] Radio	22% National 42% Local	32%	25% National 46% Local	35%	29%	36%	17%
Television	34%	20%	38%	16%	31%	24%	20%
Facebook	10%	16%	12%	18%	14%	20%	9%
Books	25%	15%	26%	12%	17%	20%	20%
[1] Academic journals/research papers	25%	15%	33%	15%	16%	12%	11%
Twitter	17%	15%	26%	22%	3%	4%	0%
YouTube	13%	11%	16%	13%	12%	8%	0%
Podcasts	6%	11%	6%	15%	2%	8%	2%
Whatsapp or Messenger groups	2%	11%	2%	14%	5%	8%	7%
[1,2] Extension officers	14%	10%	21%	11%	7%	4%	7%
[1] Short courses	NA	10%	NA	12%	5%	4%	4%
Instagram	2%	3%	2%	4%	2%	8%	0%

[1] Question not included in both surveys or slight difference in wording between survey years - see appendix table X11

2 Assessed as a source in 2020, not a mode

Table X9b. Modes of information used by the Baby Boomer+, Generation X, Generation Y- and Generation Z respondents from the 2024 Eyre Peninsula Landholder Survey (n=408-410). Percentages reflect the proportion of landholders in the three generations that used each mode in the last 12 months.

Mode of information	% Indicating 'yes'		
	Baby Boomer+	Generation X	Generation Y-
Field days	55%	54%	55%
Newspapers	47%	40%	48%
Websites	44%	47%	61%
Brochures/leaflets/newsletters	37%	33%	38%
Emails	37%	47%	41%
Magazines	36%	32%	30%
Radio	36%	29%	29%
Television	28%	17%	9%
Books	19%	12%	18%
Academic journals/research papers	16%	14%	16%
Facebook	15%	15%	23%
Extension officers	11%	10%	9%
Short courses	11%	9%	11%
Podcasts	8%	13%	20%
Whatsapp or Messenger groups	8%	11%	27%
Twitter	6%	19%	34%
YouTube	5%	18%	14%
Instagram	4%	3%	2%

Table X10a. Sources of information used by landholder types for the 2024 Eyre Peninsula Landholder Survey and overall, for the 2020 (n=461-462) and 2024 (n=408-409) survey years. Percentages reflect the proportion of landholders that used each source in the last 12 months.

Source of information	% Indicating 'yes'						
	Overall (2020)	Overall (2024)	FT (2020)	FT (2024)	PT (2024)	HF (2024)	NF (2024)
Other farmers	77%	77%	88%	84%	86%	68%	37%
[1] My own knowledge from my own experience	NA	61%	NA	69%	55%	36%	35%
Friends/neighbours/relatives	67%	58%	75%	64%	64%	44%	22%
Independent agricultural consultants, agronomists or stock agents	55%	49%	71%	61%	33%	16%	17%
Bureau of Meteorology	59%	45%	68%	47%	41%	40%	35%
Commercial agricultural consultants, agronomists or stock agents	40%	40%	55%	51%	31%	8%	7%
[1] PIRSA	50%	36%	61%	39%	43%	24%	15%
[1] Other farming system/grower groups	NA	29%	NA	37%	7%	12%	9%
[1, 2] AIR EP	44%	28%	50%	39%	16%	4%	7%
[1] Rural R&D corporations (e.g. GRDC)	30%	26%	43%	34%	19%	4%	9%
Eyre Peninsula Landscape Board	33%	17%	37%	17%	10%	16%	28%
Commodity groups	12%	13%	17%	15%	9%	8%	7%
[1] Local farming group (e.g. Landcare)	35%	9%	49%	5%	10%	12%	17%
Local Council	13%	7%	13%	6%	10%	0%	7%
Universities/CSIRO	7%	7%	10%	8%	2%	4%	7%
Soil CRC	5%	6%	6%	7%	5%	0%	2%
Environmental organisations (e.g. Greening Australia)	8%	6%	3%	5%	3%	4%	15%
[1] Regional Development Australia (RDA)	NA	5%	NA	4%	3%	4%	2%

[1] Question not included in both surveys or slight difference in wording between survey years - see appendix table X11

2 AIR EP was not assessed in 2020. Data presented is LEADA and EPARF amalgamated

Table X10b. Sources of information used by the Baby Boomer+, Generation X, Generation Y- and Generation Z respondents from the 2024 Eyre Peninsula Landholder Survey (n=408-409). Percentages reflect the proportion of landholders within each of the three generations that used each source in the last 12 months.

Source of information	% Indicating 'yes'		
	Baby Boomer +	Generation X	Generation Y-
Other farmers	78%	81%	88%
My own knowledge from my own experience	63%	66%	59%
Friends/neighbours/relatives	57%	60%	75%
Bureau of Meteorology	51%	40%	41%
Independent agricultural consultants, agronomists or stock agents	49%	51%	57%
PIRSA	41%	36%	34%
Commercial agricultural consultants, agronomists or stock agents	32%	46%	55%
Other farming system/grower groups	26%	30%	36%
AIR EP	23%	30%	41%
Rural R&D corporations (e.g. GRDC)	23%	30%	30%
Eyre Peninsula Landscape Board	16%	18%	21%
Local farming group (e.g. Landcare)	14%	4%	2%
Commodity groups	12%	16%	11%
Local Council	9%	4%	4%
Environmental organisations (e.g. Greening Australia)	9%	6%	2%
Regional Development Australia (RDA)	6%	3%	0%
Soil CRC	6%	6%	5%
Universities/CSIRO	6%	10%	2%

Table X11. Survey questions that differ slightly between the 2020 and 2024 Eyre Peninsula Landholder Surveys.

Survey section	Table / figure number	2020 question	2024 question
Land use	Table X3	Cropping	Split into cereals, legumes/pulses and oil seeds
	Table X3	Sheep for wool Sheep for meat	Sheep
	Table X3	Other tree planting (e.g. shelter, habitat, erosion or recharge control)	Other tree planting (e.g. shelter, habitat, erosion or recharge control, carbon)
Management practices	Table 2, X5, X6	Use of time-controlled, cell or holistic grazing	Use of time controlled, cell or rotational grazing
	Table 2, X5, X6	Use of no-tillage techniques to establish crops or pastures	Use of minimum or no-tillage techniques
	Table X5, X6	Application of soil ameliorants other than fertiliser and lime (e.g. gypsum, organic manure)	Application of biological soil supplements (e.g compost-tea, effluent)
	Table 2, X5, X6	Testing of soils for nutrient status in paddocks where have applied fertiliser/soil conditioners in the past	Testing of soils to understand soil condition
	Table 2, X5, X6	Preparation of a nutrient budget for all/most of the property	Preparation of a fertiliser budget/plan for all/most of the property
	Table 2, X5, X6	Planting legumes or pulses	Plant legumes (e.g. lucerne, clover, medics, pulses)
	Table X5, X6	Organic farming (whether certified or not)	Organic farming
	Table X5, X6	Deep ripping of arable land	Deep ripping or other deep soil modification/ amelioration methods
Knowledge	Figure 2 Table 11	Preparing a farm/property plan, allocating land use according to land class	Preparing a farm/property plan, allocating land use according to land class/soil characteristics
	Figure 2 Table 12	How to use soil testing to prepare a nutrient budget that will increase soil productivity	How to use soil testing to inform planning, to increase soil productivity (e.g. a nutrient budget)
	Figure 2 Table 12	The processes leading to soil structure decline in this area	The processes leading to declining soil health or structure in this area
	Table 12	The production benefits of applying biological soil supplements (e.g. compost, manure, microbial inoculants)	The benefits of applying biological soil supplements (e.g. compost, manure, microbial inoculants)

	Figure 2 Table 11	The role of understorey plants in supporting the natural ecosystem	The role of remnant vegetation/ understorey plants in supporting the natural ecosystem
	Table 11	How to establish perennial pastures (e.g. Lucerne or native grasses) in this area	Options and strategies to (re)establish perennial pastures (e.g. Lucerne/native grasses) in this area
	Table 11	Time controlled, cell or rotational grazing strategies	The use of time controlled, holistic or cell grazing strategies
Local district issues	Table X7,	Absence of important services and infrastructure (e.g. health, schools, internet, phone coverage)	Absence of important services and sufficient infrastructure (e.g. phone, schools, internet, childcare, healthcare, roads, BOM radar).
	Table X7	Non-agricultural land use (e.g. residential, solar, wind farms, mining) encroaching on farming land. Please specify.	Land use change/conflicting land use (e.g. solar, mining, residential, carbon farming) impacting/ encroaching on farmland
	Table X7	Long-term negative impacts of properties being owned by absentees or corporate farms	Long-term negative impacts of properties purchased by absentees
	Table X7	Public support/opposition for agricultural practices (e.g. pesticide use, soil loss, mulesing)	Public opposition for agricultural practices (e.g. GMs, animal welfare, pesticide use)
	Table X7	Risk to life and property from wildfires	Risk to life and/or property from bushfires/wildfires
	Table X7	The impact of pest plants and/or animals on native plants and animals	The impact of pest plants and/or animals on native plants and animals (biosecurity threats).
	Table X7	The availability of water for livestock	The availability/cost of water for livestock
Property scale issues	Table X7	Uncertain/low returns limiting capacity to invest in my property (assessed at local scale)	Uncertain returns limiting capacity to maintain/invest in my property
	Table X7	The impact of weeds or over-abundant native plant species on productivity AND the impact of feral animals or over-abundant native animal species on productivity (both assessed at local district scale)	The impact of weeds or pest animals (including overabundant native species) on productivity
	Table X7	Herbicide resistance (assessed at local district scale)	Weed/pest resistance to herbicides, pesticides and/or fungicides
	Table 14, X7	Declining nutrient status of soils	Declining fertility/nutrient status of soils, therefore increased inputs required
	Table 14, X7	Dry salinised land (magnesia patches) undermining long-term productive capacity (assessed at the local district scale)	Salinity (e.g. magnesia patches, Mallee seeps) undermining productive capacity of soils

	Table 14, X7	Soil sodicity	Soil sodicity undermining productive capacity of soils
	Table 14, X7	Phosphorus availability in calcareous soils	Phosphorus availability in soils
	Table 14, X7	Secondary impacts of previous amelioration strategies. If important, please indicate amelioration strategy	Unintended impacts of previous soil amelioration strategies
Principles	Table 5	Caring for the weak/vulnerable and correcting social injustice	Caring for vulnerable people and correcting social injustice
Views and experience statements	Table 7, X4	The cost of deep-tillage and subsoil modification are justified by increased production	The cost of deep-tillage and subsoil modification are justified by the benefits
	Table 7, X4	Soil testing is an essential first step in understanding soil condition	Soil testing is an essential step in understanding soil condition
	Table 7, X4	The costs of applying lime to address soil acidity are justified by increased production	The costs of applying lime to balance soil acidity is justified by increased production
	Table 7, X4	Fencing to manage stock access is an essential part of the work required to protect the health of waterways and native vegetation	Fencing to manage stock access is an essential element of protecting waterways, soil and native vegetation
	Table X4	I feel a personal responsibility to be part of a local research and development group	I feel a personal responsibility to be part of a local grower group (for research and development)
	Table X4	There is adequate compensation or support for conservation activities on my farm	There is adequate compensation or support provided for good land/soil stewardship
	Table X4	Most years I am satisfied with the income from my farm	Most years I'm satisfied with my farm's profitability given the seasonal conditions experienced
	Table X4	I am interested in learning more about alternative/holistic farming approaches	I am interested in learning more about regenerative/holistic farming approaches
	Table X4, X8	I'm confident that landholders in this region can adapt to expected changes in weather patterns	I'm confident that landholders in this region can adapt to expected changes in rainfall patterns
Modes and sources	Table X9a	National/state radio Local radio	Radio
	Table X9a	Journals (research articles)	Academic journals/research papers
	Table X9a	Direct contact with researchers/extension officers (considered a source)	Extension officers (considered a mode)
	Table X10a	LEADA EPARF	AIR EP
	Table X10a	Local farming groups (e.g. Ag Bureau, Landcare)	Landcare

	Figure 21 Table X10a	PIRSA/SARDI	PIRSA
	Table X10a	Rural R&D organisations (e.g. GRDC, MLA, AWI, SANTFA)	Rural R&D corporations (e.g. GRDC)
Risk and trust	Table 8	This may not be the best farm around but there is no real need to change	This may not be the best farm around, but I see no reason to change
	Table 8	I am open to new ideas about farming	I am open to new ideas about farming and land management
	Table 8	I don't have enough time to consider changing my practices	I have sufficient time available to take a few risks and experiment with new ideas
Values	Table 6	Ability to pass on a healthier and more sustainable farm for future generations	Ability to pass on a healthier environment for future generations
	Table 6	Native vegetation makes the property an attractive place to live	Native plants and animals make the property an attractive place to live
Property and you	Table X8	In the past 12 months, have you changed your financial or on-property operations as a result of seasonal changes in weather patterns?	In the past 4 years, have you changed your financial or on-property operations as a result of seasonal changes in weather patterns? (e.g. investment changes, practice changes)
	Table X8	In the past 12 months, have you changed your operations to increase the soil carbon on your property (e.g. by revegetation, soil management)	In the past 4 years, have you changed your operations to increase the soil carbon on your property (e.g. by revegetation, soil management)
	Table X8	In the past 12 months have you changed your on-property operations as a result of considering opportunities to reduce carbon emissions (e.g. generating solar and/or wind power, increased power use efficiency, improved grazing practices, improved nitrogen use efficiency)?	In the past 4 years, have you changed your on-property operations as a result of considering opportunities to reduce carbon emissions (e.g. generating wind power, improved grazing practices)?

APPENDIX 2 – SURVEY

SURVEY NO.

AGRICULTURE ON THE EYRE PENINSULA

RURAL LANDHOLDER SURVEY 2024

EYRE PENINSULA RURAL LANDHOLDER SURVEY 2024

This comprehensive survey is a vital part of efforts to understand the important social and economic factors shaping landholder decision making on the Eyre Peninsula. This follows the survey undertaken in 2020, with results providing a thorough comparison of practice changes and trends property managers are experiencing.

Information you provide will influence how funding is used in your region and how information is accessed from Ag Innovation & Research Eyre Peninsula (AIR EP) and the Eyre Peninsula Landscape Board (EPLB), as two key organisations supporting landholders to achieve viable futures on the Eyre Peninsula. Information collected will also be used to inform future activities of the Australian Soil Cooperative Research Centre for High Performance Soils (Soil CRC).

We recognise that you may not be involved in decision making for this property. We are seeking the views of the person/s primarily responsible for managing the property. If more than one, you may fill it in together. If you are not involved in the management of the property, please forward this on to the property manager or return it in the postage-paid return envelope. We ask that you only provide information for your property/s on the Eyre Peninsula.

Surveys are being sent to all landholders with properties on the Eyre Peninsula over 10 ha, identified via ratepayer list provided by the Eyre Peninsula Landscape Board. Each survey has a serial number that links to the property, enabling us to spatially reference our survey results with soil and weather data. **No specific property or person will ever be identifiable in our reporting.** Our plans are to follow up this survey in about five years, to provide insights into trends over time.

This voluntary survey should take approximately 30-50 minutes to complete. There are no right or wrong answers and there is no need to think at great length about your responses. If you have any questions about the survey, please contact Dr Hanabeth Luke on **1800 317 503** or by email at **Hanabeth.Luke@scu.edu.au**

You are assured of complete confidentiality. Your name will never be placed on the survey or used in any of the reports. No group outside the research team will have access to the survey data. Information is published at the regional scale and individual data is never published.

Thank you for your assistance,

Dr. Hanabeth Luke
Senior Lecturer & Soil CRC Project Leader
Faculty of Science & Engineering

Southern Cross University

1. LANDHOLDER IDENTITY

Please **circle** the descriptor/term that best describes your **landholder identity:**

Full-time farmer | Part-time farmer | Hobby farmer | Non-farmer

Who are the key participants **in decision making** for your property? *(Please circle all important)*

Mostly just me (the owner) | Me and my partner | Multi-generations of my family | Property manager | Property manager and owner | Technical/ Ag consultant | Financial advisor/ Accountant

2. ENTERPRISE / LAND USE MIX

This topic is seeking **information about your current land use/enterprise mix. *Please place a tick besides any correct response in the 'Situation Now' column.*** Please answer with the **land you own and manage** on the Eyre Peninsula in mind.

ENTERPRISES / LAND USE ON YOUR PROPERTY IN 2024	SITUATION NOW	ENTERPRISES / LAND USE ON YOUR PROPERTY IN 2024	SITUATION NOW
Cereals	○	Horticulture	○
Legumes/pulses	○	Irrigated agriculture	○
Oil seeds	○	Area of remnant native vegetation (e.g. trees, grasslands, wetlands)	○
Pasture	○	Farm forestry	○
Dairying	○	Other tree planting (e.g. shelter, habitat, erosion or recharge control)	○
Beef cattle	○	Farm-based tourism (e.g. farm stays, B&B)	○
Sheep	○	Heritage agreement/covenant	○
Bee keeping	○	Area set aside for living/recreation (e.g.gardens, pets, ocean access)	○
Other commercial livestock enterprises (e.g. poultry, goats, pigs, deer, horses, alpaca, dogs)	○	Other **(please specify):**	
Viticulture	○	.....	

3. MANAGEMENT PRACTICES ON YOUR PROPERTY

This section asks about practices undertaken on your property on the Eyre Peninsula prior to 2020, within the last four years, and your future plans. Tick all relevant. Some actions may not be relevant to your situation: Please ignore those topics (they will be counted as N/A).

PRACTICES IMPLEMENTED ON YOUR PROPERTY IN THE EYRE PENINSULA REGION	AT SOME POINT PRIOR TO 2020	PAST 4 YEARS (2020-present)	WILL IMPLEMENT/ CONTINUE IN NEXT 4-5 YEARS
Planting of trees and shrubs (incl. direct seeding)	○	○	○
Removal of an area of trees and/or shrubs	○	○	○
Fencing of native bush/grasslands to manage stock access	○	○	○
Use of time-controlled, cell, or holistic grazing	○	○	○
Sowing perennial pastures	○	○	○
Use of minimum or no-tillage techniques	○	○	○
Use of precision farming techniques	○	○	○
At least one lime application to arable land	○	○	○
Application of biological soil supplements (eg. compost-tea, effluent)	○	○	○
Maintaining at least 70% groundcover (in non-drought years)	○	○	○
Testing of soils to understand soil condition	○	○	○
Preparation of a fertiliser budget/plan for all/most of the property	○	○	○
Plant legumes (e.g. lucerne, clover, medics, pulses)	○	○	○
Carbon farming	○	○	○
Organic farming	○	○	○
Multi-species pastures and/or cropping	○	○	○
Integrated pest management	○	○	○
Encourage/manage native grasses/grains to grow at scale	○	○	○
Improving waste management practices on my property	○	○	○
Strip and disc farming system	○	○	○
Deep ripping or other deep soil modification/amelioration methods	○	○	○
Soil moisture monitoring (e.g. moisture probe)	○	○	○
Farming practices you consider to be regenerative Example/s:	○	○	○

4. YOUR KNOWLEDGE OF DIFFERENT TOPICS

In this section we would like you to provide **an assessment of your knowledge** for a number of different topics. ***Examine the response options. For each choice in the table, place the number of your response in the 'Your View' column.***

RESPONSE OPTIONS:

NO KNOWLEDGE	VERY LITTLE KNOWLEDGE	SOME KNOWLEDGE	SOUND KNOWLEDGE (sufficient to act)	VERY SOUND KNOWLEDGE (can give a detailed explanation)	NOT APPLICABLE
1	2	3	4	5	6

YOUR KNOWLEDGE OF DIFFERENT TOPICS	YOUR VIEW
Preparing a farm/property plan, allocating land use according to land class/soil characteristics	
Market mechanisms providing funds to support the building of carbon and/or biodiversity	
How to use soil testing to inform planning, to increase soil productivity (e.g. a nutrient budget)	
The processes leading to declining soil health or structure in this area	
How to identify the main constraints to soil productivity on your property	
Appropriate strategies and tools to address soil constraints on your property	
The role of soil carbon/ microbiology (e.g. bacteria & fungi) in soil health	
How to build soil organic matter/soil carbon	
The benefits of applying biological soil supplements (e.g. compost, manure, microbial inoculants)	
Strategies to maintain ground cover to minimise erosion in this area	
The Aboriginal group/s who are connected to the area where your property is located	
How land in your district was used and managed before European settlement	
The role of on-farm biodiversity for supporting soil and landscape health	
The role of remnant vegetation/understorey plants in supporting the natural ecosystem	
How to (re)introduce more legumes/pulses into your enterprise mix	
Options and strategies to (re)establish perennial pastures (e.g. Lucerne/native grasses) in this area	
The use of time controlled, holistic or cell grazing strategies	
Holistic farm management and/or regenerative agriculture	
How to support the persistence of native grasses in this area	
The EP Soil moisture probe network	
Potential applications of 'virtual fencing'	
Farming practices that lead to more nutrient dense food	

5. YOUR ASSESSMENT OF ISSUES

This set of statements seeks your opinion about the importance of a range of issues that may be affecting your local district and your property. ***Examine each statement in the table individually, then place the number of your response option in each space provided for 'Your View'.***

RESPONSE OPTIONS:

NOT IMPORTANT	MINIMAL IMPORTANCE	SOME IMPORTANCE	IMPORTANT	VERY IMPORTANT
1	2	3	4	5

IMPORTANCE OF ISSUES AFFECTING YOUR LOCAL DISTRICT	YOUR VIEW
Absence of important services and sufficient infrastructure (e.g. phone, schools, internet, childcare, healthcare, roads, BOM radar) **Please specify:**	
Land use change/conflicting land use (e.g. solar, mining, residential, carbon farming) impacting/ encroaching on farmland. **If important, please provide an example:**	
Long-term negative impacts of properties purchased by absentees	
Public opposition for agricultural practices (e.g. GMs, animal welfare, pesticide use)	
Loss of native plants and animals in the landscape	
Declining soil health and/or soil productivity	
Water security	
Changes in weather patterns	
Risk to life and/or property from bushfires/wildfires	
Risk to life and/or property from flooding	
The impact of pest plants and/or animals on native plants and animals (biosecurity threats)	
Support for new and young farmers	
The availability/cost of water for livestock	

IMPORTANCE OF ISSUES ON YOUR PROPERTY	YOUR VIEW
Uncertain returns limiting capacity to maintain/invest in my property	
Rising input costs	
Impact of temperature extremes and/or changing rainfall patterns on management/productivity	
The impact of weeds or pest animals (including overabundant native species) on productivity	
The activities of neighbouring landholders (eg. overspray, building dams, neglect)	
Weed/pest resistance to herbicides, pesticides and/or fungicides	
Lack of skilled labour to undertake on-property work	

IMPORTANCE OF ISSUES ON YOUR PROPERTY	YOUR VIEW
Soil erosion (e.g. due to wind or water)	
Declining fertility/nutrient status of soils, therefore increased inputs required	
Salinity (e.g. magnesia patches, Mallee seeps) undermining productive capacity of soils	
Soil acidity (lower pH) undermining productive capacity of soils	
Low levels of organic carbon in soils	
Low level of biological activity in soils	
Soil-borne diseases	
Water holding capacity of soils	
Chemical residue in soils	
Soil sodicity undermining productive capacity of soils	
Phosphorus availability in soils	
Unintended impacts of previous soil amelioration strategies	

6. THE PRINCIPLES THAT GUIDE YOUR LIFE

The next set of statements seeks information about the **principles that guide your life.** *Please number each.*

RESPONSE OPTIONS:

NOT IMPORTANT	MINIMAL IMPORTANCE	SOME IMPORTANCE	IMPORTANT	VERY IMPORTANT
1	2	3	4	5

THE PRINCIPLES THAT GUIDE YOUR LIFE	YOUR VIEW
Being influential and having an impact on people and events	
Respecting the earth and living in harmony with nature	
Caring for vulnerable people and correcting social injustice	
Creating wealth and striving for a financially profitable business	

QUESTIONS

In the **next 10 years,** what would you see as likely being your **biggest challenge and/or opportunity?**

.....

.....

7. YOUR VIEWS & EXPERIENCE

We would like to know **how closely the statements presented below reflect your views/experience.** *Examine each statement in the table, then place the number for your response in the space provided for **'Your View'** column.*

RESPONSE OPTIONS:

STRONGLY DISAGREE	DISAGREE	NEUTRAL/ UNSURE	AGREE	STRONGLY AGREE	NOT APPLICABLE
1	2	3	4	5	6

STATEMENTS	YOUR VIEW
The benefits of stubble retention outweigh problems arising from the practice	
The cost of deep-tillage and subsoil modification are justified by the benefits	
Soil testing is an essential step in understanding soil condition	
The costs of applying lime to balance soil acidity is justified by increased production	
The costs of establishing perennial pastures are justified by the returns	
Biological activity is an important indicator of the productive capacity of soils	
Fencing to manage stock access is an essential element of protecting waterways, soil and native vegetation	
Intensive grazing for short periods is usually better than set stocking	
I feel a personal responsibility to maintain the productive capacity of my soil	
I feel a personal responsibility to be part of a local grower group (for research and development)	
There is adequate compensation or support provided for good land/soil stewardship	
It is becoming more difficult to manage my farm in the face of increasing change and uncertainty	
Decision-making needs to be strongly influenced by data/scientific evidence	
I have good systems in place to manage my farm data	
Internet or mobile phone access is a barrier to finding/using information for my farm management	
Most years I'm satisfied with my farm's profitability given the seasonal conditions experienced	
I am coping well with the associated stresses and challenges of managing my farm	
I feel adequately supported to conduct farming and land management activities on my property	
I'm confident that adopting regenerative/holistic farming practices is justified by the benefits	
I am interested in learning more about regenerative/holistic farming approaches	
I'm confident that my land is in a better condition than when I took on the management of this farm	
I'm confident that landholders in this region can adapt to expected changes in rainfall patterns	
Reduced production in the short-term is justified where there are long term benefits	

STATEMENTS	YOUR VIEW
Overall, I am decreasing my use of synthetic fertiliser/pesticide inputs per hectare	
Grower groups are the best way to drive and direct local research, development and extension	
I am confident planning long-term nitrogen strategies (balancing costs, risks and expected benefits)	

OPEN QUESTIONS

Looking forward, what sort of expertise or technical support would most help you meet your farming goals?

What is the most important influence on your soil health?

What testing/indicators do you use to assess soil/land health and/or productivity?

Approximately, how often are your soils tested? ◯ At least annually ◯ Every 3-5 years ◯ Once ◯ Never

If you don't soil-test, why not?

Are you aware of the existence of AIR EP? ◯ No ◯ Yes ◯ Yes, and I'm a member

Please use the following response options to indicate the extent to which you agree with the statements below:

STRONGLY DISAGREE	DISAGREE	NEUTRAL	AGREE	STRONGLY AGREE
1	2	3	4	5

STATEMENTS	YOUR VIEW
AIR EP provides valuable information about soil, agronomy, farm management and/or natural resource management	
AIR EP can be relied on to keep landholders' interests in mind when making decisions about priorities in research, development and extension (R,D & E)	
AIR EP should play an advocacy role/lobby on behalf of my community's needs in regards to research, development & extension (R,D & E)	

What would you most like to see from AIR EP?

8. PREFERRED SOURCES OF INFORMATION

In the past 12 months, what have been **your top sources** of information about topics related to the management of your property in the Eyre Peninsula region? ***Please place a tick besides your key sources in the table below.***

MODE OF INFORMATION		ORGANISATION/PERSONS	
Television	○	Other farmers	○
Books	○	AIR EP	○
Magazines	○	Eyre Peninsula Landscape Board	○
Newspapers	○	Landcare	○
Radio	○	Local Council	○
Field days	○	Regional Development Australia (RDA)	○
Brochures/leaflets/newsletters	○	PIRSA	○
Academic journals/research papers	○	Soil CRC	○
Emails	○	Rural R&D corporations (e.g. GRDC)	○
Websites	○	Environmental organisations (e.g. Greening Australia)	○
Twitter	○	Commodity groups	○
Instagram	○	Friends/neighbours/relatives	○
YouTube	○	Universities/CSIRO	○
Podcasts	○	Bureau of Meteorology	○
Facebook	○	Independent agricultural consultants, agronomists or stock agents	○
Whatsapp or Messenger groups	○	Commercial agricultural consultants, agronomists or stock agents	○
Extension officers	○	Other farming system/grower groups	○
Short courses	○	My own knowledge from my own experiences	○

For your selection/s above, please indicate the name of your preferred top source (e.g. name of newspaper or website)

.....

9. YOUR VIEWS ABOUT RISK, TRUST AND CLIMATE

In this section, we would like to explore ***your views about taking risks, trusting others and climate change.*** *For each statement in the table, place the number of your response in the* ***'Your View'*** *column.*

RESPONSE OPTIONS:

STRONGLY DISAGREE	DISAGREE	NEUTRAL	AGREE	STRONGLY AGREE
1	2	3	4	5

STATEMENTS	YOUR VIEW
Most people are trustworthy	
People are almost always interested only in their own welfare	
I am usually an early adopter of new agricultural practices and technologies	
This may not be the best farm around, but I see no reason to change	
I prefer to see evidence of local success before trying a new practice	
I prefer to avoid risks	
I usually view risks as a challenge to embrace	
I am open to new ideas about farming and land management	
Financially, I can afford to take a few risks and experiment with new ideas	
I have sufficient time available to take a few risks and experiment with new ideas	
I really dislike not knowing what is going to happen	
CLIMATE CHANGE Climate change poses a risk to the region	
Human activities are influencing changes in climate	
It is not too late to take action to address climate change	
If we do nothing, climate change will have dire consequences for all living things, including humans	
Primary producers should do all they can to reduce carbon emissions from their activities	
Landholders should manage their properties in expectation of a highly variable climate	
Fundamental changes are required to make farming systems in our region more resilient **What sort of changes do you suggest?**	

10. WHY YOUR PROPERTY IS IMPORTANT TO YOU

The next set of statements seeks information about the ***reasons your property is important to you.*** *Examine each statement in the table and place the number for your response in each space provided for* ***'Your View'.***

RESPONSE OPTIONS:

NOT IMPORTANT	MINIMAL IMPORTANCE	SOME IMPORTANCE	IMPORTANT	VERY IMPORTANT
1	2	3	4	5

WHY YOUR PROPERTY IS IMPORTANT TO YOU	YOUR VIEW
Sense of accomplishment from producing food and fibre for others	
Having a healthy landscape that grows food of the highest quality	
Ability to pass on a healthier environment for future generations	
Sense of accomplishment from building/maintaining a viable business	
Provides opportunities to learn new things	
A place or base for recreation	
An asset that will fund my retirement	
A great place to raise a family	
Its native vegetation provides habitat for birds and animals	
An important source of household income	
An attractive place/area to live	
Provides a sense of belonging to a community	
Provides a sense of belonging to a place	
My property is an important part of who I am	
The productive value of the soil on my property	
Native plants and animals make the property an attractive place to live	
An asset that is an important part of family wealth	
A sense of accomplishment from being a part of positive change in farming	

Could you please outline/list your main goal/s in relation to your property/farm?

11. YOUR PROPERTY AND YOU

BACKGROUND INFORMATION	
What is the total area of land you own on the Eyre Peninsula? (excluding land you manage but do not own)	..... total Ha owned
Is this Eyre Peninsula property your principal place of residence?	◯ No ◯ Yes
What area of additional land do you manage (lease/sharefarm/agist from others) on the Eyre Peninsula (additional to the figure you provided above)?	..... additional Ha managed
How long have you or your family owned or managed all/some part of your property?	..... years
How many rural properties do you own on the Eyre Peninsula?	..... No. of properties
What area of your property is leased, share farmed or agisted by others?	..... Ha

INFORMATION ABOUT YOU AND YOUR MAIN OR 'HOME' PROPERTY	PLEASE TICK OR FILL IN YOUR RESPONSE
Has this enterprise bought additional land in this region in the past 20 years?	◯ No ◯ Yes
Have you subdivided or sold part of your property in this region over the past 20 years?	◯ No ◯ Yes
Estimate the number of **hours per week** that you **worked on farming/property** related activities **(average over the past 12 months)**.	..... hrs/week
What is your age?	..... years
What is your gender? ◯ Male ◯ Female ◯ Non-binary	
Do you identify as Aboriginal and/or Torres Strait Islander?	◯ No ◯ Yes
What is your main occupation (e.g., farmer, teacher, investor, retiree)?	
What is the highest level of formal education you have completed? ◯ Trained in life but no formal quals ◯ Year 10 ◯ Year 12 ◯ Vocational Certificate ◯ Tertiary/Uni	
Are other **family members** working on your property **on a daily or weekly basis?** **If yes, please indicate who they are:** ◯ Partner ◯ Child/ren ◯ Parent/s ◯ Sibling/s ◯ Other/s	◯ No ◯ Yes
Have you prepared/are you preparing a property management or whole farm plan that involves a map or other documents that address the existing property situation and include future management and development plans?	◯ No ◯ Yes
Is any proportion of your land presently lost to production due to soil problems? If yes, how many hectares have been lost due to soil problems? **Please specify the issue:**	◯ No ◯ Yes ..... Ha
Do you have a disaster response plan prepared? (e.g. a flood or bushfire plan)	◯ No ◯ Yes

11. YOUR PROPERTY AND YOU (CONT)

INFORMATION ABOUT YOU AND YOUR MAIN OR 'HOME' PROPERTY	PLEASE TICK OR FILL IN YOUR RESPONSE
In the past 4 years, have you changed your financial or on-property operations as a result of seasonal changes in weather patterns? (e.g. investment changes, practice changes) **Please note what these changes have been:**	◯ No ◯ Yes
In the past 4 years, have you changed your operations to increase the soil carbon on your property (e.g. by revegetation, soil management)	◯ No ◯ Yes
In the past 4 years, have you changed your on-property operations as a result of considering opportunities to reduce carbon emissions (e.g. generating wind power, improved grazing practices)	◯ No ◯ Yes
Did you earn income from agriculture on your Eyre Peninsula property during 2022/2023 financial year?	◯ No ◯ Yes
Did your Eyre Peninsula property return a net profit during the 2022/2023 financial year? (i.e. income exceeded all expenses before tax)	◯ No ◯ Yes
Has your Eyre Peninsula property returned a net profit over the last 4 years? (i.e. income exceeded all expenses before tax, on balance, over the 4 year period)	◯ No ◯ Yes
Does your family rely on off-farm income and investments?	◯ No ◯ Yes
Did you or your spouse/partner receive a net off-property income (after expenses and before tax) in the financial year (2022/2023)?	◯ No ◯ Yes, me ◯ Yes, my partner
In the 2022/2023 financial year, what percentage of you (and your spouse's) income was earned off farm? (eg. from shares, rental income, employment, other business)	..... %
Estimate the number of **days** you were involved in **paid off-property work in the past 12 months**	..... days per year
In the past 5 years have you or your partner **completed a short course/workshop** relevant to property management? (e.g. financial planning, integrated pest management)	◯ No ◯ Yes, me ◯ Yes, my partner
In the last 12 months, did you attend field days, farm walks and demonstrations focused on soil health and productivity?	◯ No ◯ Yes

On average, what is the longest time-frame you consider when making strategic decisions on the farm/land?
◯ Opportunistic ◯ Seasonal ◯ Year to year ◯ Up to 5 years ◯ 6-20 years ◯ Over 20 years ◯ Over 100 years

In the last **12 months,** what **management decision** was the most important influence on your **profitability?**

.....

Over the last **4 years,** what **management decision** was the most important influence on your **profitability?**

.....

Is there a **particular technology/tool/innovation/knowledge** that would support your farm management goals?

.....

12. LONG-TERM PLANS FOR YOUR PROPERTY

Please indicate the possibility that your **long-term plans** for your property in the **next 10 years** will involve each of the choices in the table below. Examine the response options underneath this paragraph. For each choice in the table, place the number of your response option in the ***'Your View'*** column.

RESPONSE OPTIONS:

HIGHLY UNLIKELY	UNLIKELY	UNSURE	LIKELY	HIGHLY LIKELY
1	2	3	4	5

LONG TERM PLAN OPTIONS	YOUR VIEW
Ownership of the property will stay within the family	
The property will be sold	
The property will be subdivided and a large part of the property sold	
I will move off the property around/soon after reaching retirement age	
All or most of the property will be leased or share farmed	
Additional land will be purchased	
Additional land will be leased or share farmed	
The enterprise mix will be changed to diversify income sources	
The enterprise mix will be changed to more intensive enterprises	
A family member will seek additional off-property work to support the farm	
Some part of my property will be set aside for conservation purposes	
Buying property outside of my current area to mitigate increased seasonal variability	
Investing in the farm to increase the productive potential of my current landholding	

Is this a corporate-owned farm? (*Please tick your answer*) ◯ No ◯ Yes

What proportion of your property contains an area of remnant, restored or planted native vegetation or wetland?

◯ 0% ◯ 1-25% ◯ 26-50% ◯ 51-75% ◯ 76-100%

Do you have family members interested in taking on your property in the future? *(Please tick your answer)*

◯ No ◯ Yes ◯ Unsure/too early to know ◯ Not applicable

If Yes, has your family agreed to a **succession plan?** (*Please circle your answer*)

Not started Early stages Halfway Well advanced Completed/Ongoing

OTHER COMMENTS AND THANK YOU FOR YOUR TIME

Do you have any other comments about any of the topics covered in the survey, or other aspects of land and water management on the Eyre Peninsula? Please use the space provided to write your comments or attach additional sheets. Your comments will be recorded by the research team.

We sincerely appreciate the time you have spent answering the questions. **Please return the completed survey in the postage-paid envelope provided.**

If you need assistance with the survey, wish to make specific comments about it, or receive a copy of results, please contact Dr Hanabeth Luke via 1800 317 503.

If you would like to be contacted as a part of further research, please write your email address or other contact here: