

LAND MANAGEMENT IN THE WIMMERA: RURAL LANDHOLDER SUMMARY

As part of the Soil CRC's nationwide Social Benchmarking for Rural Landholders project, a 16-page questionnaire was mailed to a random sample of rural property owners in the Wimmera region of Victoria in early 2023, with a response rate of 34%. Southern Cross University researchers partnered with Charles Sturt University, Wimmera CMA and the local governments of Ararat, Buloke, Hindmarsh, West Wimmera, Yarriambiack and Pyrenees, in order to develop and undertake the survey.

PROFILE OF LAND MANAGEMENT IN THE WIMMERA

Survey respondents self-identified by landholder type as follows: 58% full-time farmers; 17% part-time farmers; 8% hobby farmers; and 17% non-farming landholders. The reported median landholding for all landholders was 550 hectares, which was 1100 hectares across two properties for full-time farmers. The most common land uses are sheep for meat or wool (63%), cereal cropping (62%), legumes (50%) and native vegetation (46%). Of full-time farmers, 79% of respondents live on their Wimmera property. The median length of family land ownership was reported as 57 years, with a mean of 63 years. The majority of full-time farmers (86%) were male, with a median age of 62 years.

REGIONAL AND ON-FARM CHALLENGES

Issues were selected from lists developed for the questionnaire in local workshops. Figure 1 shows the most important regional issues for each landholder type, with the top property-level issues in Figure 2.

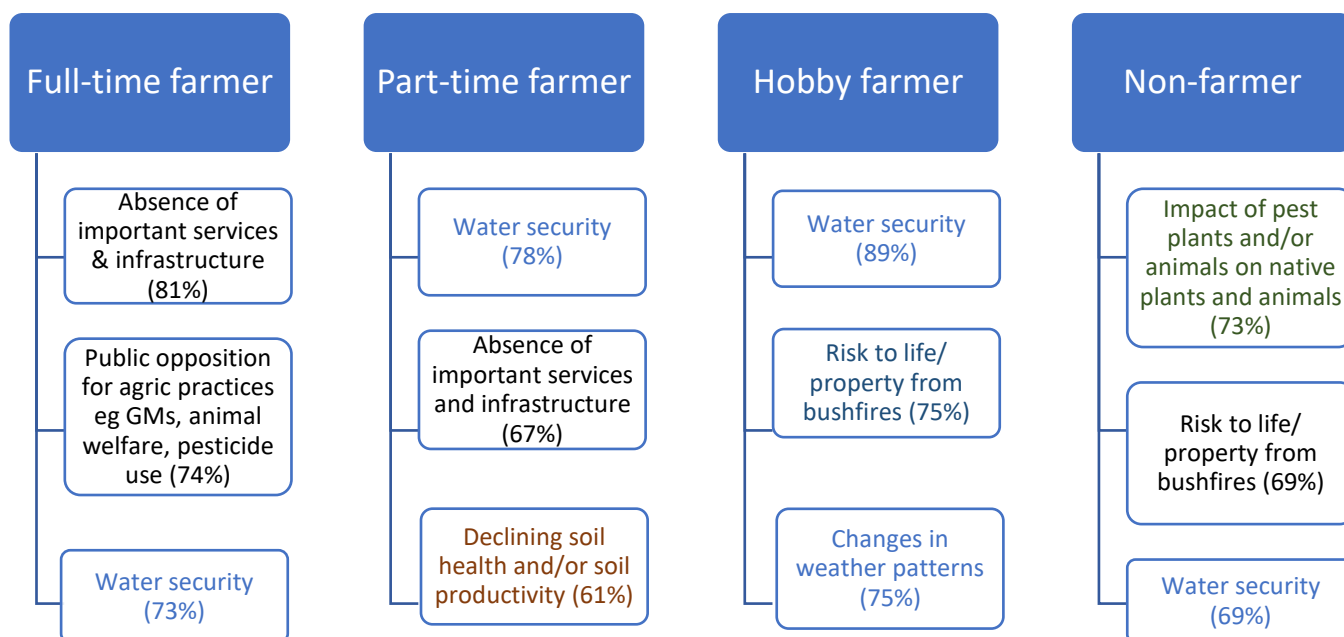


Figure 1: Top 3 **regional issues** by farmer type, 2023. Blue text shows factors potentially influenced by accelerated seasonal & climate change, with soil issues in orange, biodiversity concerns in green.

The most important regional issues were 'water security', 'absence of important services and infrastructure', and 'public opposition for agricultural practices' (Figure 1).

At property level, respondents were most concerned about 'rising input costs' and 'weed resistance to herbicides, pesticides and fungicides' (Figure 2).

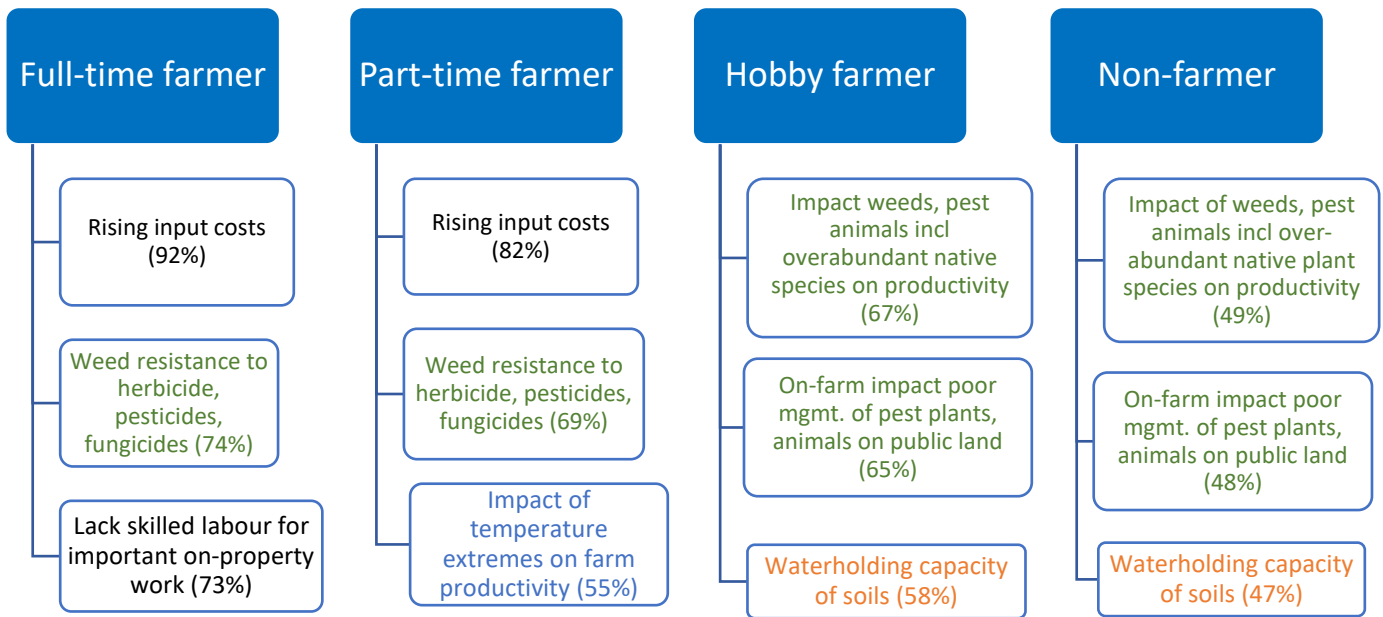


Figure 2: Top 3 **property-level issues** by farmer type, 2023. Blue text shows factors potentially influenced by accelerated seasonal & climate change, with soil issues in orange. Weed and pest concerns are in green.

When asked an open question on what the biggest challenge and/or opportunity might be over the next ten years, the most common issues raised were climate change and rising input costs (e.g., "inconsistent and extreme weather events", "climate variability resulting from climate change", and "increased financial risk due to high annual input costs").

In relation to climate change, 59% overall agreed that human activities are influencing our climate, and 45% said the effects of climate change pose a risk to the region. Together, this demonstrates strong concern about the lived impacts of climate change for property owners and farmers. Approximately half (45%) of all respondents agreed that if nothing is done, climate change will have dire consequences. There was a level of confidence that landholders in the region can adapt to changes in rainfall patterns (68%), with 40% agreeing that fundamental changes are required to make the region's farming systems sustainable. Of full- and part-time farmers, 41% agreed that primary producers in the region should do all they can to reduce carbon emissions.

FARMING PRACTICES AND COMPLEXITY IN LAND MANAGEMENT

The data indicates a strong level of personal responsibility among farmers to maintain the productivity of their soil (87% landholders overall, 93% full-time farmers). In the Wimmera, the four most common farming practices undertaken (combined FT, PT) in the last five years were: planting legumes (clover, lucerne, pulses) (67%), minimum or no-tillage (64%), maintaining at least 70% ground cover (59%), and soil testing to understand soil condition (53%). When asked what the biggest influence on their soil health has been, the top response was maintaining groundcover. This aligned with the top three most common practices. Respondents also included the use of crop rotation and avoiding over-stocking as important for soils.

For all landholders, 76% deemed biological activity to be an important indicator of the productive capacity of soils, with 46% reporting to have sound knowledge of how to build soil organic matter/soil carbon. Overall, one fifth had changed their operations to increase the soil carbon on the property in the past 12 months (e.g., by revegetation, soil management). Twenty percent overall were 'confident that adopting regenerative/holistic farming practices is justified by the returns',

DRIVERS OF CHANGE

Landholders in the Wimmera are willing to consider practice change: 89% of all respondents agreed that they were open to new ideas about farming and land management. Half said that they had financial resources to experiment with new ideas, with only 38% having sufficient time to do so. In relation to farmer attitude towards change, one third considered themselves to be early adopters, compared with 19% seeing no reason to change. Taken together, the responses suggest that, overall, landholders have an open mindset, although there are financial and time constraints on investment in new practices. When it comes to risk, 35% indicated they would prefer to avoid risks.

The 2023 Survey provided opportunity to compare changes in responses between 2016 and 2023 for some topics. Median property size of respondents decreased from 765 ha (2016) to 550 ha (2023); median age increased from 57 years to 61 years, and hours worked per week on-property decreased from 48 (2016) to 38 (2023), indicating that there may be less full-time farmers managing the land. Table A provides indications of further changes in how respondents view issues.

Table A. Examples of data trends between the 2016 Survey and 2023 Survey (2023)

Topic	Wimmera 2016	Wimmera 2023
Top 3 property issues	<ol style="list-style-type: none"> 1. Impact drought, changing rainfall patterns 79%. 2. Impact weeds, pest animals (incl. native species) on profitability 66%. 3. Impact poor management of pest plants, animals on public lands 61%. 	<ol style="list-style-type: none"> 1. Rising input costs 77%. 2. Weed resistance to e.g., herbicides, pesticides, fungicide 66%. 3. Impact of weeds & pest animals (incl. native species) on productivity 62%.
Top 3 district issues	<ol style="list-style-type: none"> 1. Impact reduced water flows on health rivers, streams, wetlands 63%. 2. Reduced opportunity for recreation as lakes dry out 61%. 3. Decline in soil health e.g., fertility, soil structure 59%. 	<ol style="list-style-type: none"> 1. Water security 75%. 2. Absence of important services & infrastructure e.g., health, schools, internet, phone coverage 73%. 3. Public opposition for agricultural practices e.g., GMs, animal welfare, pesticides 64%.
Top 3 sources of information	<ol style="list-style-type: none"> 1. Newspapers 69%. 2. Field days 55%. 3. Friends, neighbours 53%. 	<ol style="list-style-type: none"> 1. Other farmers 74% 2. Independent consultants, agronomists 55% 3. Newspapers 49%.

VALUES

When looking at the values that all landholders attach to their property, the 'ability to pass on a healthier environment for future generations' and 'sense of accomplishment building/maintaining a viable business' were most important. Also represented by respondents were: being an attractive place to live, a great place to raise a family and that native plants/animals make it an attractive place to live.

ACCESSING INFORMATION

To focus on those farming commercially, non-farmers and hobby farmers were removed from the sample. The most frequently nominated information mode for full and part-time farmers combined were newspapers (49%), field days (46%) and websites (45%). The top source of knowledge was other farmers (74%), a farmer's own knowledge from their own experiences (62%), and independent agricultural consultants, agronomists or stock agents (55%).

Data from full-time and part-time farmers was broken down into three age categories, determined by the following definitions: Baby Boomer + (born prior to 1965); Generation X (born 1965-1980); Generation Y and younger (born from 1981 onwards). The age breakdown reveals that Baby Boomers are more likely

to access traditional information sources such as newspapers (58%), younger farmers are more likely to use websites (Gen X 62%) and email (Gen Y 59%). Around 50% in all three groups drew on field days for information on agriculture or land management, and 10% across the three groups used YouTube.

DATA MANAGEMENT AND USE

Farmer (FT, PT) belief in the importance of data for informing decision-making is relatively low, at 63%. Although there is a strong belief in the importance of soil testing (86%), and a general confidence in working with numbers, soil testing was implemented by only 53% of farmers within the previous five years. This indicates that farmer capacity to use and apply this data has room for improvement, with 31% of farmers reporting having prepared a nutrient budget, and under half of farmers having prepared a whole farm plan. When asked about soil testing frequency on their property, 41% of full-time and part-time farmers indicated that they tested every 3 – 5 years; 23% at least annually; 12% once, and 24% never.

WIMMERA PROPERTIES AND PRACTICES BY GENERATION

Of the youngest group, 88% had purchased additional land in the region in the last 20 years (compared to 54% of the Baby Boomer+ group). Younger farmers had higher levels of self-assessed knowledge on some topics (e.g., use of soil moisture probe data to decide on crop/pasture management; role of wetlands/native veg filtering water entering lakes, rivers), with that knowledge translating into higher rates of practice-implementation. For example, the use of minimum or no-till practices, for which 94% of Gen Y adopted, 76% of Gen X had implemented and 60% of Baby Boomers. Similarly, the use of soil tests to understand soil conditions had been implemented by 82% of Gen Y, 62% of Gen X compared with 49% of the Baby Boomer group.

LONG-TERM PLANS

With 11% of farmers (FT, PT) indicating that they intend to sell the property, ownership turnover of farm land is projected to be low. A third of (34%) of farmers replied that they intend to purchase additional land, which is in line with broader industry trends to larger holding sizes. Twenty-eight percent of farmers indicated they would lease additional land, 18% intended to change the enterprise mix to diversify income or move toward intensive enterprises (9%). Over three-quarters (82%) of farmers indicated that ownership of the property would stay within the family.

The transition to retirement and succession planning were major issues raised in the open questions. This was reinforced by the figures, with low levels of succession planning in progress. While full-time farmers were the most likely to have commenced succession planning, only 39% had well advanced plans in place, with an additional 14% having plans halfway developed.

BUILDING RESILIENCE THROUGH PARTNERSHIP BETWEEN SCIENTISTS AND FARMERS

A key aim of this Soil CRC project is to learn how to best engage and support farmers for improved integration of farm-management and soil-health outcomes into the future. Achieving this requires researchers continually working with farmers to gain a good understanding of their needs, the challenges they face, and their ideas for a more resilient farming system, now and into the future. We thank every landholder who took the time to develop and/or complete the survey – we cannot do this work without their significant contribution. Please note that this summary document presents summary data and further analyses will be undertaken for the Social Benchmarking Report. To access the full report, contact Dr Hanabeth Luke: Hanabeth.luke@scu.edu.au, or lookout for it on the Soil CRC website.

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