

AGRICULTURE IN THE CENTRAL WEST: LANDHOLDER SUMMARY

A survey was mailed out to a random sample of rural property owners in Central West NSW with a landholding greater than 10 hectares. Southern Cross University researchers partnered with Charles Sturt University, Central West Farming Systems and Central West Local Land Services to develop and undertake the Soil CRC survey. The response rate of 31% represented 575 returned surveys from an adjusted sample of 1872. The analysis focused on aspects of particular importance for the local partners.

PROFILE OF FARMING IN CENTRAL WEST NEW SOUTH WALES

From the survey responses, the most common land use was sheep and beef (59% & 52% respectively). Of all landholders, 60% were using land for pastures and 47% were cropping. The median land holding was 1140 hectares across two properties. Overall, 76% of respondents live on their Central West property, rising to 83% for full-time farmers. The median length of family land ownership was reported as 55 years, with a mean of 80 years. Across all respondents, the median age was 61 years and 22% were female. Survey respondents self-identified by landholder type as follows: 55% full-time farmers; 19% part-time farmers; 18% hobby farmers; and 8% non-farming landholders.

REGIONAL AND ON-FARM CHALLENGES

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

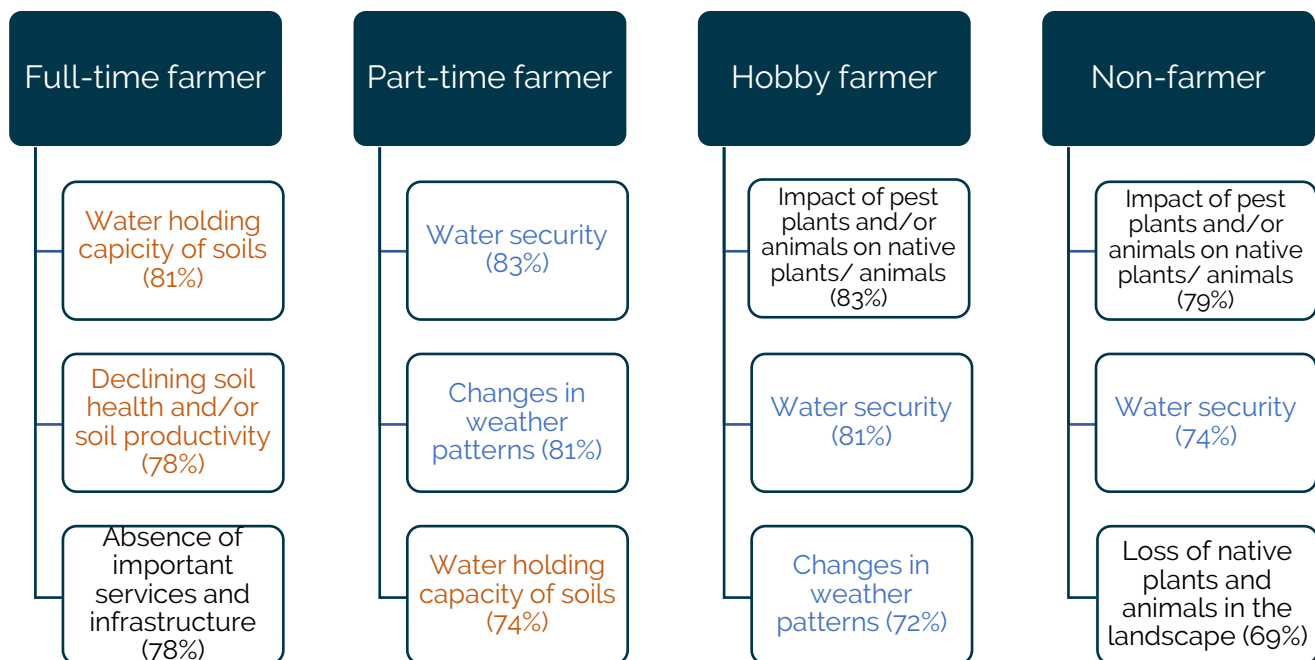


Figure 1: Top 3 most important **regional issues** by farmer type (n= 514 to 550), with the issues directly related to seasonal changes highlighted by the use of the colour blue, with soil issues in orange.

For all landholder types, the most important issue for the region was 'declining soil health and/or soil productivity' (77%). This was followed closely by the 'water holding capacity of soils' (76%) and the 'absence of important services and infrastructure' (74%). At property-scale, the 'impact of weeds or over-abundant native plant species on productivity' (74%); the 'declining nutrient status of soils' (63%) and the 'impact of temperature extremes on farm productivity' (62%) were the top three issues.

When considering the largest landholder group, full-time farmers, their top issues were: 'water holding capacity of soils' (81%), 'declining soil health and/or soil productivity' (78%), and the 'absence of important

services and infrastructure' (78%). Responses for full-time and part-time farmers were brought together to reflect farmers whose livelihood is attached to their property. Of this group, 78% agreed that they were coping well with the associated stresses of managing their farms. Worryingly, this was only 69% for Gen X farmers (aged between 41-56) - with 11% of this group reporting that they were not coping well.

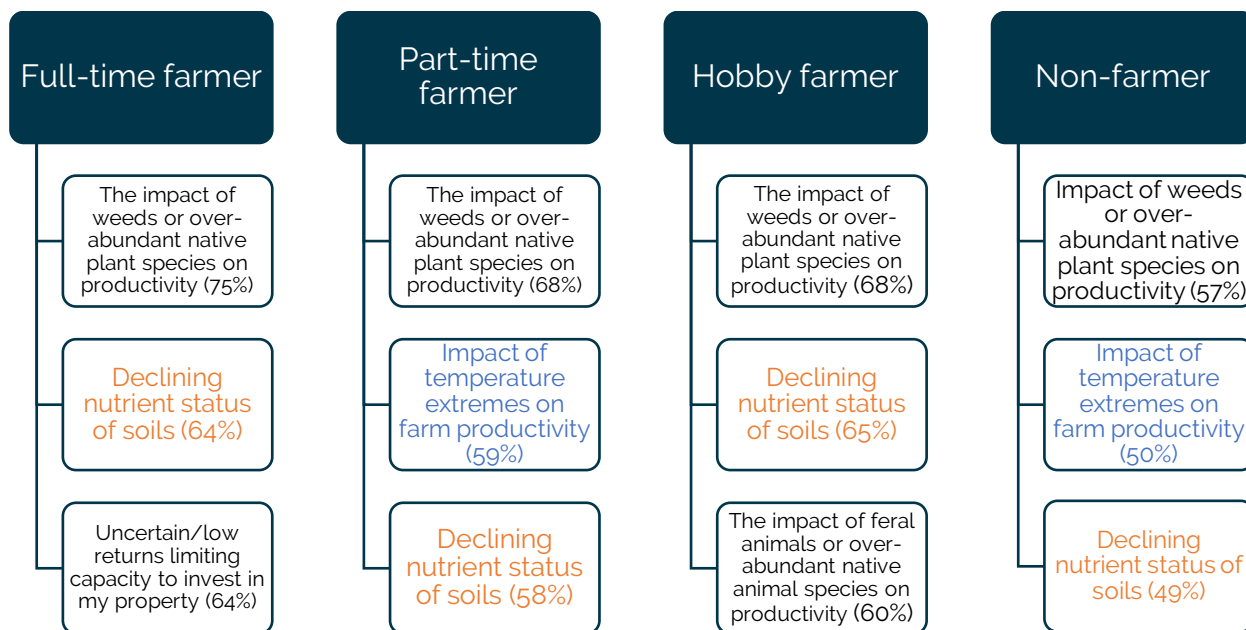


Figure 2: Top 3 most important **property-level issues** by farmer type, 2021 (n= 527 to 545). Orange colour indicates soil-related items common across farmer types. Factors potentially influenced by accelerated seasonal and climatic change are blue.

VALUES

For the whole group, the most important values people attached to their property were 'the ability to pass on a healthier environment to future generations (87%); 'being an attractive place/area to live' (87%); 'a great place to raise a family' (83%); and 'the productive value of the soil on my property' (81%). These values are shown by landholder type in Figure 3.

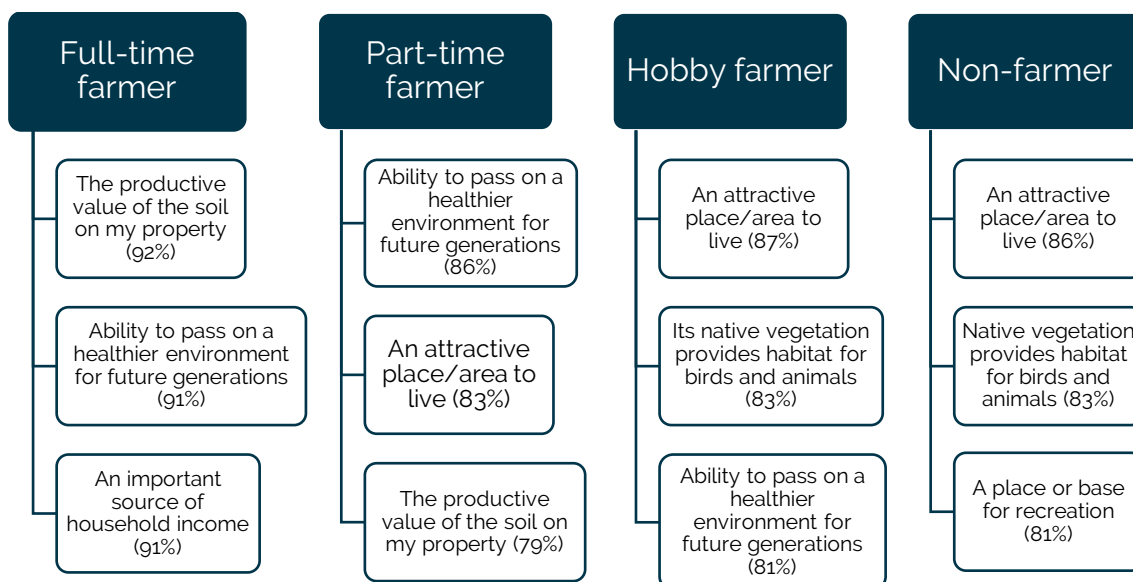


Figure 3: The **values people attach to their land**, by landholder type - showing some major differences by group.

When looking at the values that guide landholders' lives, 'Looking after my family/loved-ones and their needs' was important across all landholder types (96%), representing a strong focus on the family unit. The next most important value was preventing 'pollution and protecting natural resources' (86%) followed by 'creating wealth and striving for a financially profitable business' (79%).

FARMER ENGAGEMENT

When asked about their top sources of information for farm and property management, the top source of knowledge for farmers, was 'other farmers' (67%), followed by their own 'knowledge and experience' (66%); newspapers (51%); and friends/neighbours/relatives' (50%). "The Land" was nominated as a popular publication for sourcing information. Half of farmers use an independent agronomic consultant, with a third using commercial consultants. Farmers under 56 were also far more likely to use websites or social media platforms to inform their farming. Extension officers were reported as a key source for 12% of all farmers. Farmers under 41 years of age were twice as likely to use scientific articles directly. Local Land Services was a key information source for 42% of farmers.

Just under half of full and part-time farmers (45%) agreed that 'farming system groups are the best way to drive and direct local research, development & extension'. Of this group, 44 % had attended field days/farm walks/demonstrations focused on soil health and productivity in the past 12 months.

DATA MANAGEMENT AND USE

More than half of farmers (59%) agreed that data is an important part of farm management. However, 53% viewed internet connectivity as a barrier to using on-farm data. Of this group, 56% agreed that they already have good systems in place to manage farm data.

Soil testing was perceived as an integral element of data gathering, with 84% of farmers agreeing that it is an essential step in understanding soil condition. However, just 47% of all respondents and 55% of farmers indicated that they had performed soil testing in the last 3-5 years, with 19% testing their soils annually. Of those who were testing soils regularly, 83% sampled systematically across many paddocks.

On-farm management was largely collaborative, with three quarters of farmers including other people in their management decisions. Most often, this was a spouse/partner, family or agronomist.

FARMING PRACTICES, RISK AND RESILIENCE

The data indicates a strong level of personal responsibility among farmers to maintain the productivity of their soil (94%). Maintaining at least 70% ground cover (in non-drought years) stands out as the most common farming practice undertaken in the last five years (67%), followed by the lethal control of pest animals (62%); the use of no-tillage techniques to establish crops or pastures (56%) and soil testing (55%).

When asked what the biggest impact on their soil health has been, ground-cover was by far the most important, followed by grazing practices and stock management.

Of all farmers, 93% deemed biological activity to be an important indicator of the productive capacity of soils. The results show that carbon farming is the number one topic that farmers want to learn more about, with only 4% of farmers reporting to have sound knowledge of it.

Farmers who intended to keep the farm in the family were more likely to make strategic decisions in consideration of longer time frames of over 20 to 100 years.

RISK AND OPENNESS TO CHANGE

Central West farmers are willing to consider practice change: 90% agreed that they were open to new ideas about farming and land management. However, only just over half (51%), agreed that they had the financial resources to experiment with new ideas, with 46% having sufficient time to do so. In relation to farmer attitude towards change, 38% considered themselves to be early adopters, with 28% happy with the way things are. Taken together, the responses suggest that while farmers have an open mindset, there are financial and time constraints upon adoption. When it comes to risk, 70% indicated they were not willing to take a risk if their 'gut/intuition says no'.

BELIEFS ABOUT CLIMATE CHANGE

When asked what the biggest challenge and/or opportunity might be over the next ten years, the most common answer among property holders was climate change, followed by succession planning and drought. While at property scale, water holding capacity of soils and declining productivity were of greater concern for farmers (79% and 76% respectively). When asked to consider whether human activities are influencing our climate, 58% of farmers and 61% of all land holders agreed. For commercial farmers, 61% agreed that landholders in the region should do all they can to reduce carbon emissions.

Together, this demonstrates strong concern about the lived impacts of climate change for property owners and farmers. More than half (53%) of all respondents and 48% of farmers agreed that if nothing is done, climate change will have dire consequences. There was a level of confidence that local landholders in the region can adapt to changes in weather patterns (62%). Notably, 47% agreed that fundamental changes are required to make the region's farming systems sustainable.

THE FUTURE OF FARMING IN CENTRAL WEST NEW SOUTH WALES

Respondent 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 younger categories managed more land in comparison to Baby Boomers (942 hectares), with an average of 1262 hectares for generation Y; and 1586 hectares for generation X. Generation X worked the most hours on farm per week (50 hours), followed by Generation Y (42 hours) and Baby Boomers (37 hours).

LONG-TERM PLANS

Of all respondents, 17% indicated that they intend to sell the property (15% of farmers). A third of farmers indicated that they intended to purchase additional land, in line with broader industry trends to larger holding sizes. Of farmers, one fifth indicated they would lease additional land, while 26% intended to change the enterprise mix to diversify income. Of farmers, 16% indicated that they intend to move toward intensive enterprises. Overall, 72% of all respondents and 75% of farmers indicated that ownership of the property would stay within the family. Regarding farm succession planning, 30% had not started a plan, 26% were in the early stages; 11% at the halfway point, and 17% had advanced plans in place.

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 scientists continually working with farmers to gain 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. To access the full report contact Dr Hanabeth Luke: Hanabeth.luke@scu.edu.au, which will be made available via the Soil CRC website.



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