

## AGRICULTURE IN THE NORTHERN WHEATBELT: LANDHOLDER SUMMARY

This research employed a survey of all rural landholders in the Northern Wheatbelt with a landholding greater than 10 hectares. Soil CRC researchers partnered with local groups West Midlands Group, Wheatbelt NRM, the Liebe Group and WANTFA to develop and undertake the survey, which received a response rate of 24%. The analysis focused on areas of particular importance for our local partners.

### PROFILE OF FARMING IN THE NORTHERN WHEATBELT

From the survey responses, the most common land use was for cereal cropping (73%), pastures (54%), legumes (46%), and sheep for wool (45%) and meat (45%). For all landholders the median land holding was 3227 hectares across two properties. For full-time farmers, this increased to 3902 hectares. Overall, 83% of respondents reside on their Wheatbelt property, rising to 91% of full-time farmers, with the reported median length of family land ownership being 55 years, with a mean of 90 years. Across all respondents, the median age was 55 years and 92% of respondents were male. Across all LGAs, the majority of respondents identified as full-time farmers, and overall the numbers were:

- Full-time farmers: 72%
- Part-time farmers: 10%
- Hobby farmers: 8%
- Non-farming landholders: 10%

The most important regional issues by farmer type are shown in Figure 1, and the most important property-level issues in Figure 2:

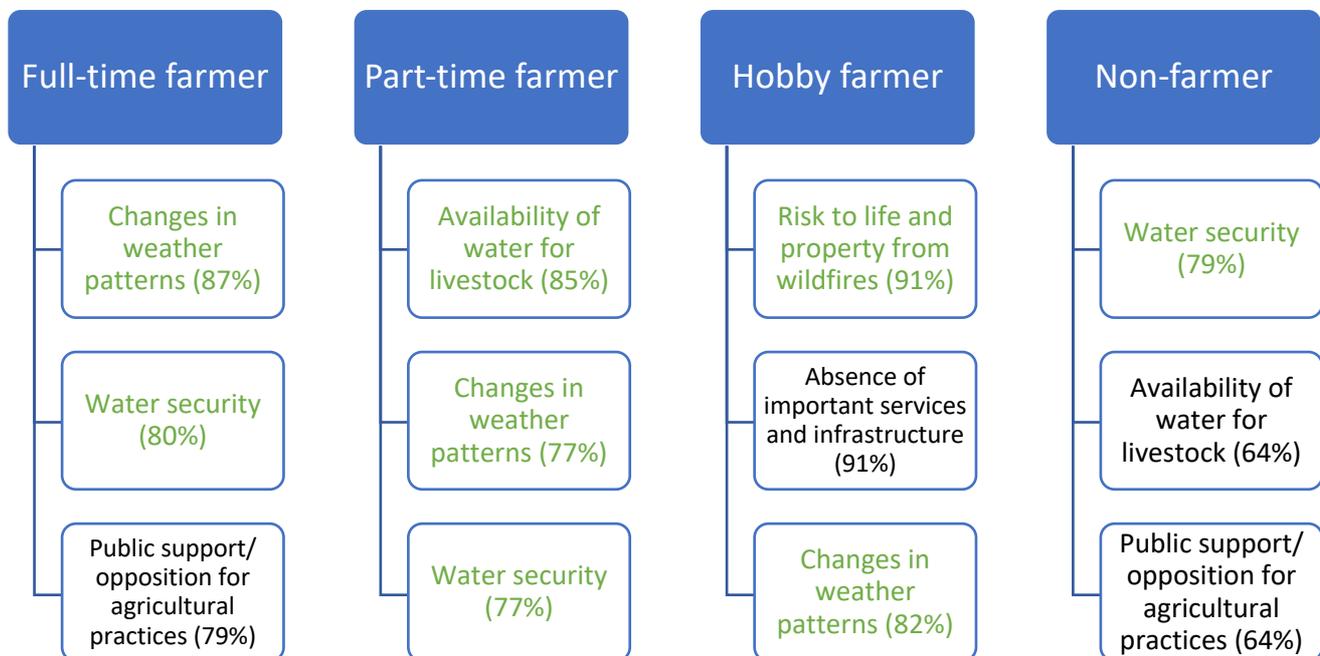


Figure 1: Top 3 most important regional issues by farmer type (n= 139 to 146), with the issues related to climate change in the region highlighted by the use of the colour green.

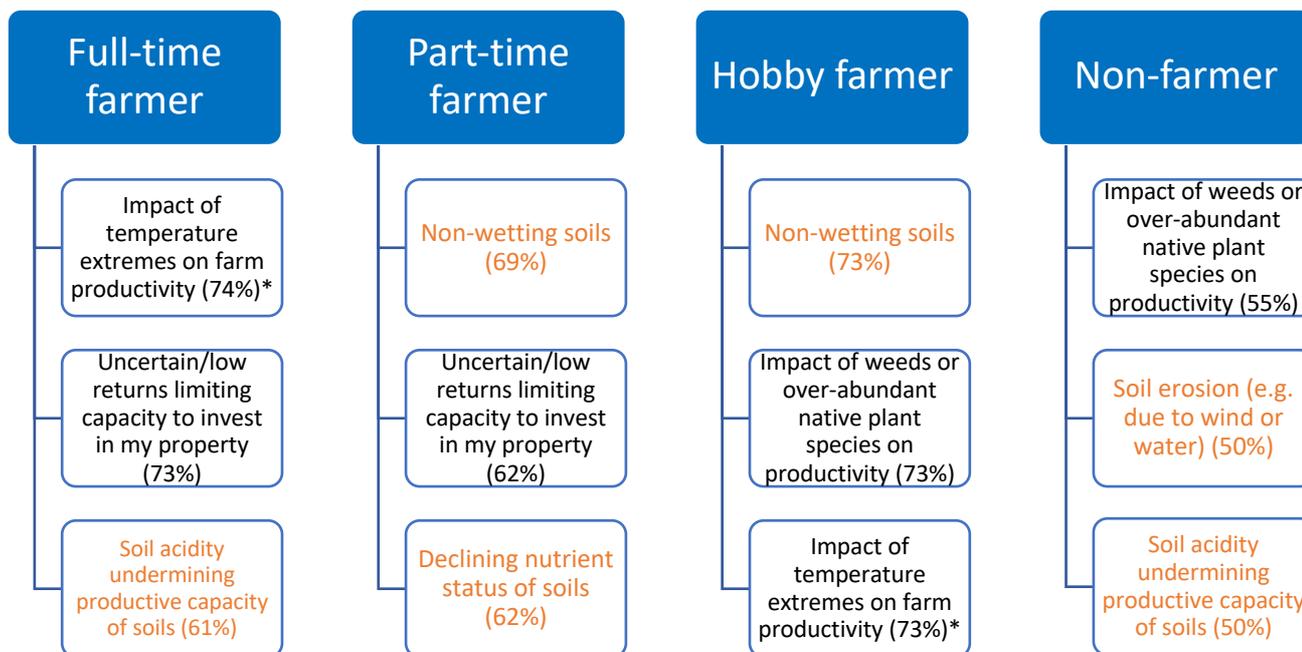


Figure 2: Top 3 property-level issues by farmer type, 2020 (n= 111 to 145). Orange colour indicates soil-related items common across farmer types. \* relates to factors potentially influenced by accelerated climate-change.

## VALUES

The Northern Wheatbelt encompasses landholders with a range of intersecting values, some of which are intrinsic or 'held', while others relate to their landholding. When looking across the whole sample, these were the property representing the ability to pass on a healthier environment to future generations (84%); as an asset that is an important part of family wealth (83%); a great place to raise a family (82%); and the property as a source of accomplishment from building and maintaining a viable business (82%). When looking at intrinsic values that guide landholders' lives, 'Looking after my family/loved-ones and their needs' was important across all landholder types' (99%), representing a strong focus on the family unit.

## FARMER ENGAGEMENT

Respondents were asked what their top sources of information were related to the management of their property. The top source of knowledge was other farmers (76%), followed by independent advisors such as agronomists and agricultural consultants (60%). For full- and part-time farmers, field days and magazines presented as the most nominated way of sourcing information (both 59%) with Farm Weekly nominated as a popular publication.

More than half of farmers (54%) agree that grower groups are the best way to drive and direct local research, development and extension. 66% of full-time farmers and 40% of part-time farmers had attended field days/farm walks/demonstrations focused on soil health and productivity in the past 12 months.

There was a relatively equal spread of membership rates amongst full- and part-time farmers for local grower groups West Midlands Group and Liebe (both 20%) and the local NRM group (17%). WANTFA had membership rates of about 10% of the survey sample. Membership rates of the grower groups are largely linked to LGA given the geographical distribution of the groups, with Dandaragan, Moora and Coorow covered by West Midlands Group, and Wongan-Ballidu and Dalwallinu covered by Liebe.

## DATA MANAGEMENT AND USE

The majority of full-time farmers agreed that data is an important part of farm management, yet more than half (51%) report internet connectivity as a barrier to using on-farm data. 71% of full-time farmers

agreed that decision-making needs to be strongly influenced by data and 61% 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 92% of full-time farmers agreeing that it is an essential step in understanding soil condition.

On-farm management was largely collaborative, as 86% of full-time farmers (79% overall) include another person or people in their management decisions. Most often, this was a spouse/partner, family or an advisor such as an agronomist.

## **FARMING PRACTICES, RISK AND RESILIENCE**

Soil testing stands out as the most common practice in the current period (2015 - 2020) at a rate of 82%, followed by the application of lime (76%), and the planting of legumes or pulses (70%). Whilst there are some topics for which there is a sound level of knowledge, particularly '*strategies to maintain ground cover to minimize erosion in this area*', many other topics have low reported knowledge levels. Part-time farmers' knowledge tends to be much lower than that of full-time-farmer across most topics.

Overall, the data indicates a strong level of personal responsibility to maintain the productivity of soil and soil testing as an essential step, particularly amongst full-time farmers.

### **REGIONAL AND ON-FARM CHALLENGES**

For full-time and part-time farmers, the top three issues for the region were changes in weather patterns (86%), water security (77%), and public support/opposition for ag practices (77%).

The top two property-scale issues were the impacts of temperature extremes on farm productivity (74% of full-time-farmers), and the impact of uncertain or low returns on their capacity to invest in the property (73%). The impact of weeds or over-abundant native plant species on productivity was also important.

### **RISK AND OPENNESS TO CHANGE**

Wheatbelt farmers are open to new ideas, with 95% of full-time farmers agreeing that they were open to new ideas about farming and land management. However, this was complicated by low levels of agreement on other measures, such as '*Financially, I can afford to take a few risks and experiment with new ideas*' (half of full-time farmers), '*I am usually an early adopter of new agricultural practices and technologies*' (half of full-time farmers), and '*I have sufficient time available to consider changing my practices*' (38% overall, 42% of full-time farmers). This suggests that while farmers have an open mindset, there are financial and time constraints upon adoption.

### **BELIEFS ABOUT CLIMATE CHANGE**

Changes in weather patterns emerged as the number one issue across landholder types, with water security in the top four issues for all farmer types. When asked what the biggest challenge and/or opportunity might be over the next ten years, the most common answer was climate change and weather variability.

Together, this demonstrates strong concern with the lived impacts of climate change. There is strong data that predicts impacts of climate change in the Wheatbelt and survey respondents were largely cognisant of these risks, and only 11% of respondents disagreed that climate change poses a risk to the region, with 70% agreeing and 19% unsure. 61% of all respondents agreed that human activities are influencing changes in climate and 57% agreed that landholders in the region should do all they can to reduce carbon emissions.

More than half (55%) of all respondents agreed that if nothing is done, climate change will have dire consequences. There was a high level of confidence that local landholders in the region can adapt to changes in weather patterns (67%), yet less than half of respondents (47%) agreed that fundamental changes are required to make the region's farming systems sustainable.

## THE FUTURE OF FARMING IN THE NORTHERN WHEATBELT

Respondent data from full-time and part-time farmers was broken down into two age categories, determined by the following definitions: Generation X (born 1965-1980) and younger; and Baby Boomer and older (born prior to 1965), with differences between the groups explored.

For the younger group, there was clear evidence of trends toward extensification and/or intensification, with slight trends of scaling back for the older group. The younger cohort managed more land, with an average of 2166 hectares compared to the older cohort's average of 968 hectares. 81% of the younger group had bought additional land in the region in the last 20 years (compared to 57% of older group).

The older group had an average of 318 hectares of their land managed by others (compared with 31 hectares of the younger group). The younger group work an average of 56 hours per week on the farm, compared to 47 hours per week by the older group. The area in which the most differences emerged was in the levels of self-assessed knowledge between the groups, with the younger generation indicating a higher level of self-assessed knowledge across a number of knowledge topics.

### LONG-TERM PLANS

With only 9% of full-time farmers indicating that they intend to sell the property, intended ownership turnover of farmlands is low. 43% of full-time farmers indicated that they intended to purchase additional land, which is in line with broader industry trends to larger holding sizes, and around a quarter indicated they would lease additional land (26%) and intended to change the enterprise mix to diversify income (27%) or move toward intensive enterprises (20%).

Overall, 72% indicated that ownership of the property would stay within the family, including 80% of full-time farmers. However, only 52% of full-time farmers had a family member interested in taking on the property. When asked what the biggest challenge and/or opportunity might be over the next ten years, after climate change and weather variability, succession planning was noted as an issue. Low levels of succession planning were in train, with full-time farmers most likely to have commenced planning.

### BUILDING RESILLIENCE THROUGH PARTNERSHIP BETWEEN SCIENTISTS AND FARMERS

The end goal of this Soil CRC project is to ascertain how to best engage and support farmers so that there is a better integration of farm-management and soil-health outcomes into the future. Achieving this this requires scientists continually working with farmers to gain a really strong 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](mailto:Hanabeth.luke@scu.edu.au), which will be accessible via the Soil CRC website.

