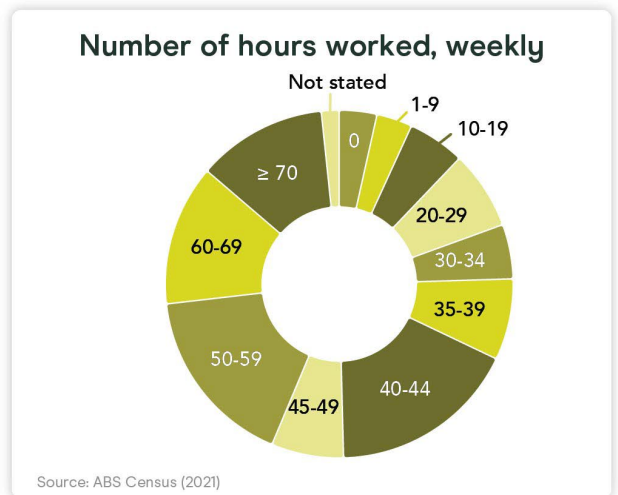
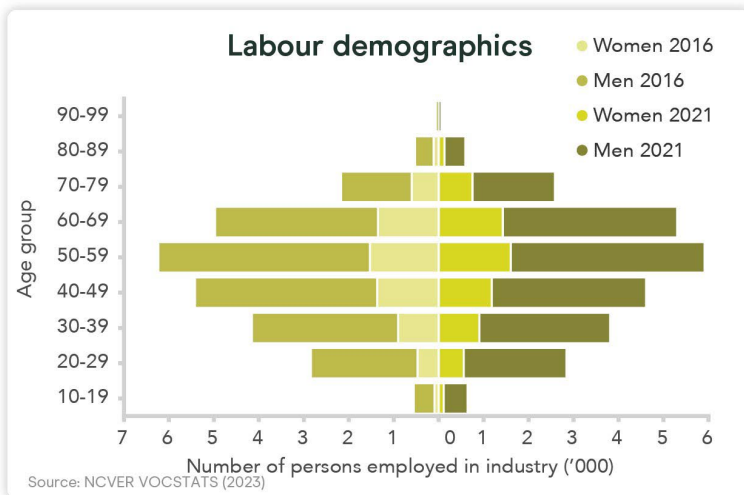
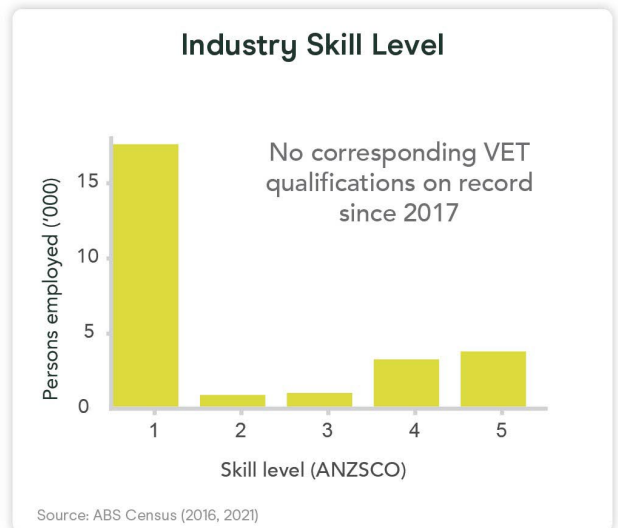
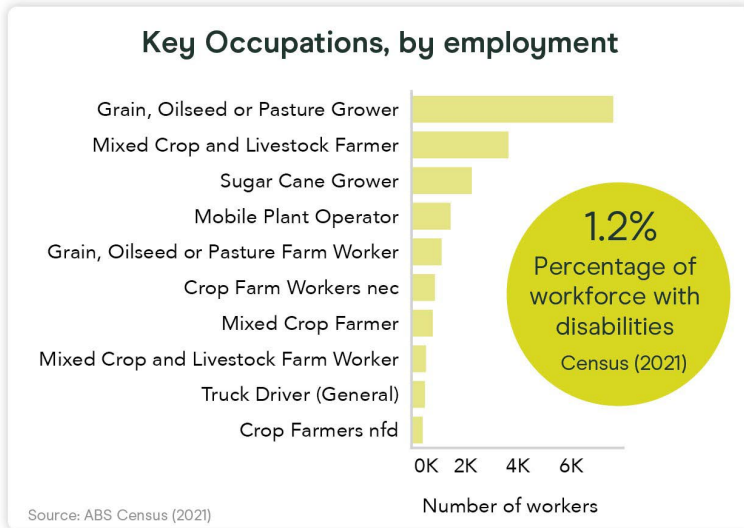
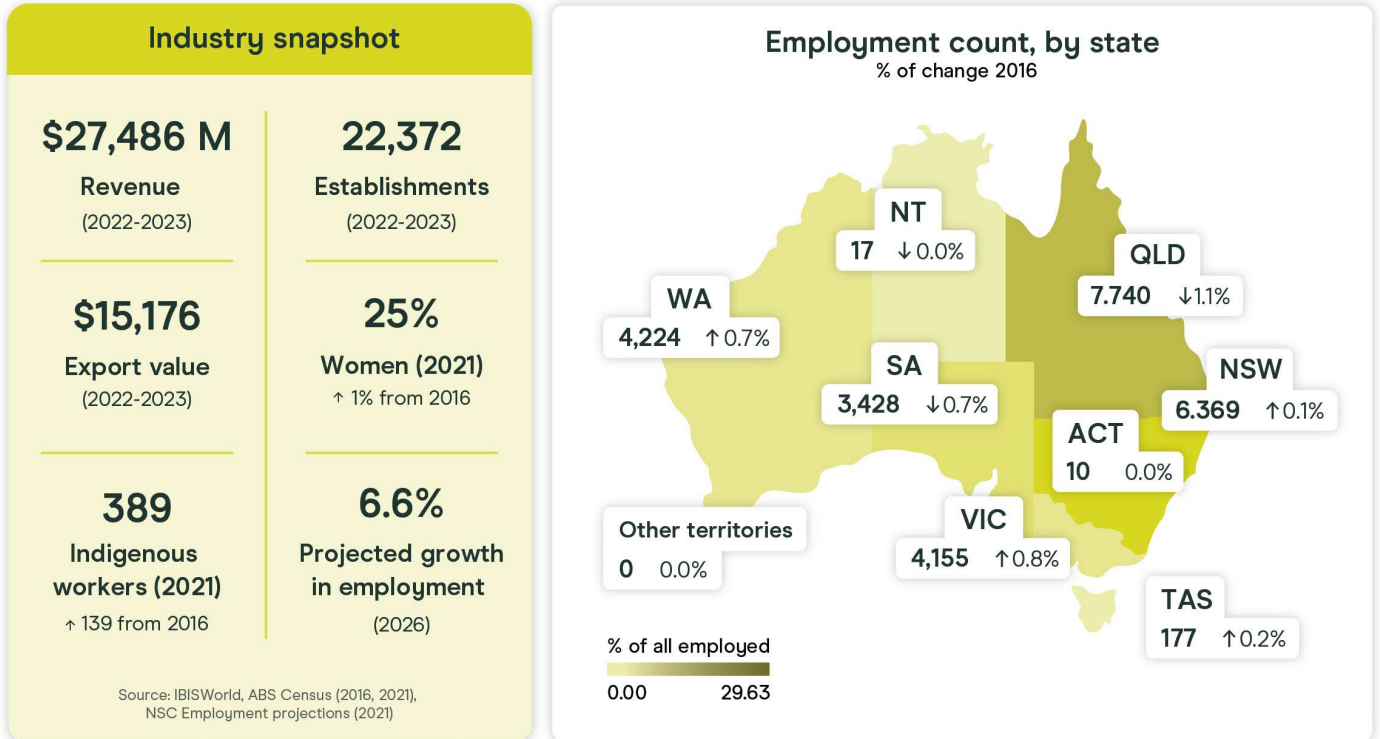


3.2. Broadacre Cropping (dryland and/or irrigated)



Broadacre Cropping (Dryland and irrigated)

ANZSIC A0146, A0149, A0151, A0152, A0159



3.2.1. Industry sectors (ANZSIC Classes)

- Rice Growing
- Other Grain Growing (including wheat and barley)
- Sugar Cane Growing
- Cotton Growing
- Other Crop Growing

Note: mixed livestock/crop farming operations are included in the Livestock Farming grouping

Key insights from industry sector infographic and other data	Priority
Labour shortages	High
Lack of gender diversity	Medium
Ageing workforce	Medium

Australia's broadacre cropping industries comprise generally large-scale operations that produce a range of high-quality commodities, including wheat, rice, oats, rye, barley, corn, peas, millet and sorghum. Many broadacre farms also diversify into different cereal-cropping activities and sometimes into livestock farming.

Operations in this industry typically utilise capital-intensive equipment, such as tractors and irrigation systems, and advanced technologies to monitor planted areas, test soil, and irrigate and harvest crops. Rice farms, which are water-intensive operations, use laser technology and advanced software to design farm irrigation systems and achieve water savings. Broadacre cropping businesses also integrate digital technologies and sensors to accurately identify and spray weeds to achieve efficient use of herbicides. Global positioning systems, geographic information systems and spectral imaging for remote sensing assist grain farmers to determine which crops are best suited to each area.

The workforce applies skills to achieve sustainability, efficient water use, soil health, reduced fertiliser use (e.g. through composting), manage pests and adopt new technologies.

Below are examples of units of competency, primarily delivered as part of Certificate III in Agriculture, that are unique to the skills and knowledge applied by competent broadacre cropping workers:

Unit title	Unique skills and knowledge
Operate broadacre and row crop harvest machinery and equipment (AHCMOM308)	This unit applies to individuals who operate broadacre or row crop harvesting machinery and equipment.
Operate broadacre sowing machinery and equipment (AHCMOM309)	The unit applies to individuals who operate broadacre sowing machinery and equipment

3.2.2. Drivers of workforce dynamics

Labour shortages

Broadacre cropping is one of the many sectors within agriculture in which the disparity between new entrants and retirements is predicted to result in a need for additional participants.

The National Skills Commission's 2022 Skills Priority List shows there are regional and state-based shortages, particularly in NSW, Queensland and the NT, for the following occupations:

- Cotton Grower
- Grain, Oilseed, Pulse or Pasture Grower / Field Crop Grower
- Sugar Cane Grower
- Broadacre Crop Growers nec
- Flower Grower
- Senior Broadacre Crop Farm Worker
- Senior Broadacre Crop and Livestock Farm Worker
- Broadacre Crop and Livestock Farmer
- Grain, Oilseed, Pulse and Pasture Farm Worker

The Victorian Skills Authority estimates that Victoria will need an additional 750 crop farmers and workers by 2025, which is one of the largest labour deficits for any industry in the State.²⁸ Labour shortages for long haul drivers and technical advisors in the sugar cane industry, and a more general seasonal labour shortage in the cotton industry have also been identified in Queensland.²⁹

Workforce diversity

Women are under-represented in the broadacre cropping workforce (25% in the 2021 Census, which was only up 1% from 2016). Meanwhile, older age groups are over-represented (54% are aged 50 years and over). Workforce planning strategies, therefore, may focus on the attraction and retention of women and younger people in order to meet succession planning needs.

Digital and automation practices

ABARES data indicates that climate-adjusted productivity in Australia's broadacre industries grew by 0.6% per year on average between 1988–89 and 2021–22. Grain industries in particular had a year-on-year average productivity increase of 1.4% over the same period.³⁰ According to ABARES Executive Director Jared Greenville, 'Significant advancements in technology and management practices were essential in achieving this result and we need that to continue that.'³¹

Within the broad theme of digital and automation practices, access to labour with competencies in monitoring highly complex and expensive machinery, including mechanics and service people, has been identified as a pressing issue within the grain sector, particularly in Queensland.³²

Broadacre Cropping Summary

Workforce challenges

- Labour shortages.
- Workforce diversity and culture: gender disparity, ageing workforce, long working hours.
- The adoption of automation and robotics technologies, which is augmenting skills and job roles.

Key evidence gaps

- Relevant VET training is contained within qualifications with broad application and outcomes (e.g. Certificate III in Agriculture and Certificate III in Rural Operations) and there is an evidence gap concerning the flow of graduates to for the broadacre cropping industries.

Workforce planning priorities

- Support industry skills and workforce leadership development, notably to help implement succession planning strategies **(2a, 2d)**
- Support industry to attract a diverse workforce to address imbalances and labour shortages **(4b)**
- Support strategies to address skills shortages, especially concerning digital technology and machinery operation. **(2a, 2c, 3a, 3b, 4b)**
- Research on the flow of graduates from relevant VET qualifications, and other education and training pathways, to/within the broadacre cropping industries. This may support the identification of skills gaps, duplication in existing training pathways, and the extent to which delivering more graduates may help to alleviate skills shortages. **(1a, 3a)**