

Mallee Food Industry Supply Chain Analysis and Identified Opportunities **Summary**

September 2020



Food industry in the Mallee Region

Food industries dominate the Mallee region's economy. The northern part of the region is well known as one of Australia's most significant food bowls, while the southern end of the region is in the heartland of Victoria's grain and pulse belt

The Mallee food supply chains



Support
2,218
agricultural
businesses
across
2,282 million
hectares



Contribute
\$3.77
billion
in output
That's \$1.89 billion
in farmgate value



Directly employ
11,483
people
or
31.4% of the region's
employed workforce

The region supports a high proportion of Victorian production across many sectors:

Fruit and Vegetables

- ▶ 24% of Victoria's apricot production (1.5 million kg)
- ▶ 99.9% of Victoria's table grape and dried grape production (112,000 tonnes)
- ▶ 99.9% of mandarin production (9,317 tonnes)
- ▶ 99.8% of melon production
- ▶ 99.6% almond production (55,546 tonnes)
- ▶ 97.2% of orange production (65,398 tonnes)
- ▶ 97.2% grapefruit production (1,397 tonnes)
- ▶ 97.0% lime production (389 tonnes)
- ▶ 94.3% of avocado production (1,632 tonnes)
- ▶ 75.5% of wine grape production (217,817 tonnes)
- ▶ 75.5% of pumpkin production
- ▶ 45.8% of carrot production
- ▶ 34.3% of capsicum production
- ▶ 27.8% of lemon production (1,858 tonnes)
- ▶ 25.5% of 'other' nuts (predominantly pistachios and walnuts)
- ▶ 57.5% of olive production (35,733 tonnes)
- ▶ 73.7% of nectarine production (17,051 tonnes)
- ▶ 35.0% of Victoria's garlic production

Cropping

- ▶ 100% of Victoria's rice production (219 tonnes)
- ▶ 34.4% of Victoria's wheat production (623,478 tonnes)
- ▶ 35.0% of barley production
- ▶ 31.9% of sorghum production
- ▶ 28.6% of triticale production
- ▶ 60.5% of lupin production
- ▶ 34.4% of chickpea production
- ▶ 37.3% of other pulses

Livestock and other products

- ▶ 4.4% of Victoria's sheep and lambs (571,000 head)
- ▶ 4.1% of dairy cattle (68,175 head)
- ▶ 2.1% of meat cattle (37,428 head)
- ▶ 6.4% of Victoria's pigs (35,721)
- ▶ 2.2% of table egg layers (96,038) – 83% free range
- ▶ 17.9% of other poultry (ducks, game birds)
- ▶ 4.9% of Victoria's farmed goats (1,756)
- ▶ 9.7% of Victoria's beehives (2,938)



The region's supply chain

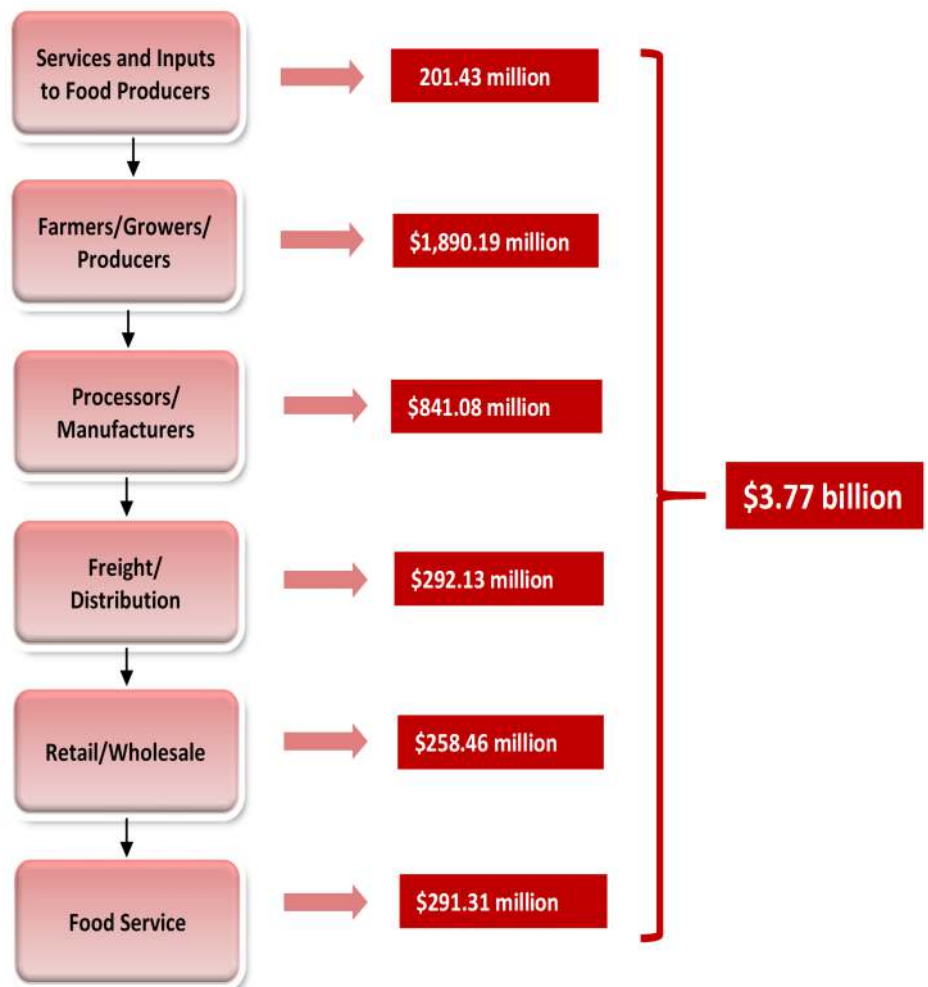
Farm aggregation, horticultural land buybacks (and separation of land ownership and water rights), automation, industry restructuring, and globalisation have contributed to regional declines in jobs in agriculture and food processing, while jobs in food service have increased substantially.

Now, in the Mallee

- ▶ 4.2% of food jobs are in supplying producer inputs and services
- ▶ 44.2% of food jobs are in farming/growing
- ▶ 11.0% of food jobs are in processing/manufacturing
- ▶ 8.7% of food jobs are in logistics (warehousing, transport)
- ▶ 15.1% of food jobs are in wholesale and retail
- ▶ 16.9% of food jobs are in food service (cafes, restaurants, catering, takeaways, clubs and pubs).

The estimated annual output from the Mallee's regional food industry supply chains is \$3.77 billion, summarised by supply chain level, in Figure E1

**Figure 1:
Estimated food industry
sectors output: Mallee
Regional Food Supply
Chain, 2018¹**



¹ Street Ryan estimates based on Australian Bureau of Statistics (ABS) employment 2016 data by 4-digit ANZSI Classification, REMPLAN regional economic output estimates for 2018, and ABS Agricultural Census 2015-16



There are food industry challenges across all supply chains in Mallee.

The most common of these challenges are:

- ▶ Climate variability and increasing frequencies of adverse climatic events; drought, hail, severe temperatures (at both hot and cold extremes particularly at the start and end of fruiting seasons in horticulture), wind, fire and humidity. Higher probabilities of one or more of these events occurring in any year give reduced confidence to investors and/or increase the investment needed to protect against adverse climatic events (where this is possible, such as climate control structures, greater geographic spread of operations and use of new technologies).
- ▶ Costs of business operations and infrastructure including water, power, communications, and transport.
- ▶ The Murray Darling Basin plan and varying allocations of irrigation water.
- ▶ Onerous statutory and planning requirements.
- ▶ Global competition and pricing.
- ▶ The influence of Australian supermarkets on the supply chain.
- ▶ Increased consumer awareness and demands for integrity and value.
- ▶ Ownership of an increasing number of Mallee region processing businesses by non-locally based Australian and international companies, which have national and global business development agendas.

While recognising the challenges facing Mallee's food supply chains, there has been a selection of opportunities identified for each major supply chain group.



Horticulture and viticulture supply chains:

- ▶ Opportunities in this sector are considered greatest in:
 - Commercialising new plant varieties which have improved characteristics to either deal with climate change issues (eg new varieties that are more salt tolerant, water efficient, frost resistant, early or late maturing) or have distinguishing marketable features (eg size, flavour, colour).
 - Participating in research and new product development to take advantage of the explosion in demand for plant-based foods and extracts. The peak horticultural bodies in the Mallee are well placed to lead some off these initiatives through their levy systems and links with Horticultural Innovation Australia (HortInnovation) and Rural Industries Research and Development Corporation (RIRDC) now known as Agri Futures.
 - Harnessing tourism, provenance and branding potential from the increasing number of artisanal and niche producers in the region. The number of producers in this category (including all three supply chain groups of Horticulture and Viticulture, Grains and Bakery and Meat, Poultry and Dairy) is not as substantial as some regions in Victoria but it is clearly growing steadily, and with both recognised and emerging tourist attractions these businesses, if coordinated, are likely to add to the visitor experience.
- Diversifying the range of products to secure throughput volumes and provide a hedge over climate variability.
- Managing water as effectively as possible, using advanced technologies such as sub-surface drippers, moisture sensing and computer-controlled watering.
- Responding to environmental issues and concerns through new growing technologies, harvesting and packaging solutions.
- ▶ Specific supply chain improvement and re-engineering opportunities within the Mallee region identified in horticulture and viticulture were:
 - New dried grape variety commercial development
 - Expanded mushroom production system
 - Integrated nut grower cooperative
 - Nut processing facility and grower expansion to attract horticulturalists looking to enhance sustainability
 - Vegetable product development and import replacement
 - Fruit value adding and co-product development
 - Condiments and sauces product diversification and further processing
 - Collaborative artisanal and emerging niche food business marketing, development and agritourism. This opportunity encompasses businesses in grains, bakery, meat, poultry and dairy sectors as well.

Opportunities for supply chain improvement



Grains and bakery supply chains:

- ▶ Opportunities in this sector are considered greatest in:
 - Stock feed production tailored to the needs of intensive livestock producers (poultry mashes and pellets, piggeries, and lot-feeding operators)
 - Development of textured vegetable proteins (TVPs) from grains and legumes to provide import replacement for companies making plant based meat alternative products.
 - Research and trial production of traditional and 'ancient' grains to meet demand from small, artisanal and gourmet bakeries and food service chains as well as breweries and distilleries.
- ▶ Specific supply chain improvement and re-engineering opportunities in the Mallee region identified in grains and bakery were:
 - A new plant to service Australia's independent beverage producers
 - Export focused oilseed processing
 - Factory expansion and new supply alliances for a vegetable product group
 - Production for new demand in the baking sector.

Four of the identified opportunities were prioritised for some assistance in moving towards implementation, through an expansion of the business case for each one, preparation of funding applications and development of budgets and work plans. At least one of these will proceed beyond the project.



Meat, poultry and dairy supply chains:

- ▶ Opportunities in this sector are considered greatest in:
 - Offering bio-secure broadacre growing locations.
 - Increased free range and organic production. Whole of life free-range and bred free-range have become marketing and ethical features in the industry, and in the consciousness of consumers.
 - Demonstrating that livestock products can be efficient users of water, able to work with restricted volumes allocated to irrigators.
 - Gourmet and other value-added products are likely to be the area for small producers in the Mallee. This will mean increasing the number of meat, poultry and dairy farmers who are able to supplement sales with direct sales of products like eggs, cuts of meat, cheese, cream, yoghurt or other products of their own. These businesses would join the niche and artisanal producers of the region to offer logistics cost-efficiency and agri-tourism.
 - Broadacre areas of the Mallee region, in Buloke and Gannawarra, offer potential to accommodate both new and expanding poultry businesses, with investments protected by statutory planning and bio-security controls. Although poultry production is intensive, it is most sustainable in a broadacre environment. Access to feed supplies, water and power complete the industry's major needs.
- ▶ Three specific supply chain improvement opportunities in the Mallee identified in meat, poultry and dairy (all 'greenfield' opportunities) were:
 - Intensive livestock attraction: Poultry
 - Intensive livestock attraction: Piggeries
 - Freshwater aquaculture investment.





Opportunities for supply chain improvement



4

enhanced
supply chains



around

45

alliance
partners
across 4 projects



60+

regional supplier
businesses



33.5m

in capital
investment



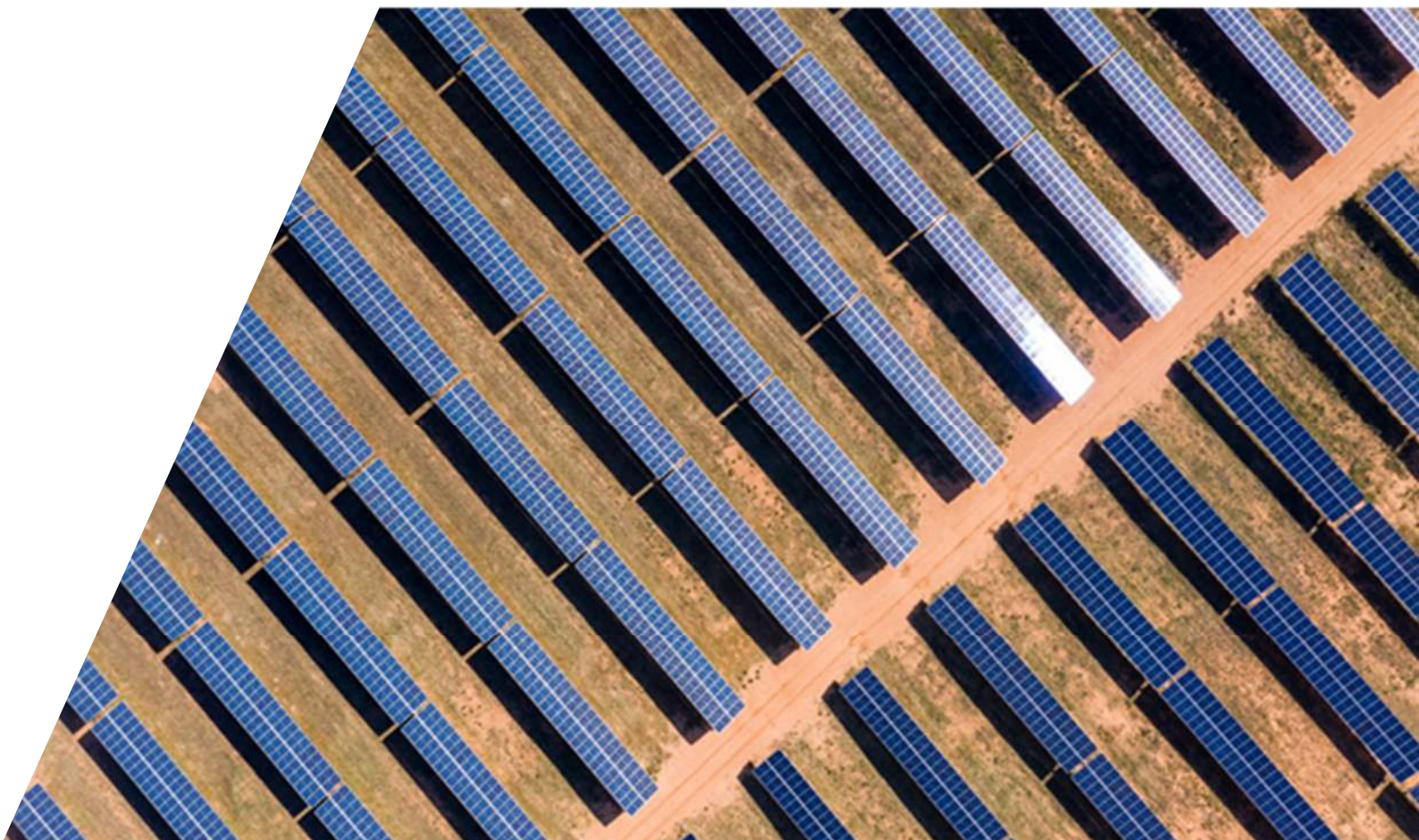
73m

in annual new
revenue streams



76

new full-time
equivalent jobs





Overview

The food sector is the largest component of the Mallee Region's economy. There are opportunities to strengthen the supply chains in the food sector, potentially through further Regional Partnership, through the Department of Jobs, Precincts and Regions, sponsored a project to analyse the food industry supply chains across the region.

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A supply chain is the movement of goods and services as they flow progressively from one business function to another until delivered to an end customer. In the global economy, many commentators insist “*supply chains competing with supply chains*” is becoming the norm, instead of individual businesses competing with other businesses.

Markets for manufactured food products are rapidly changing. There are major changes in the way Australian supermarkets are dealing with their suppliers, there is enormous growth in niche and artisanal enterprises and there is a huge world-wide focus on healthy and functional foods and on sustainability. Despite these trends, many medium-scale Mallee supply chains are focused on lower value, undifferentiated products (fresh, chilled, minimally processed and first stage manufactured) and it is re-engineering these supply chains that offers the greatest opportunities for improvement. Lower value, undifferentiated production has been acceptable in the past but is now not enough to secure future operational viability due to a culmination of:

- ▶ Escalating costs, especially power, water and freight/logistics.
- ▶ Statutory requirements, which are increasingly stringent and litigious.
- ▶ Global competition and pricing
- ▶ The influence of Australian supermarkets on the supply chain (which is more significant in some food sectors than others)
- ▶ Increased consumer awareness and demands for integrity and value.

At the first food production, ‘farmgate’, level in the supply chains, the Mallee contains 21.4% of Victoria's agricultural land (2.82 million hectares) and 10.7% of the state's agricultural businesses. It supports a high proportion of Victorian production across many sectors. Figure 2 presents the farmgate value of agricultural products across the Mallee's local government areas in 2016 and Figure 3 summarises the farmgate value of large agricultural product types.

Figure 2:
Gross Farm Gate Value of
Agriculture (2016)

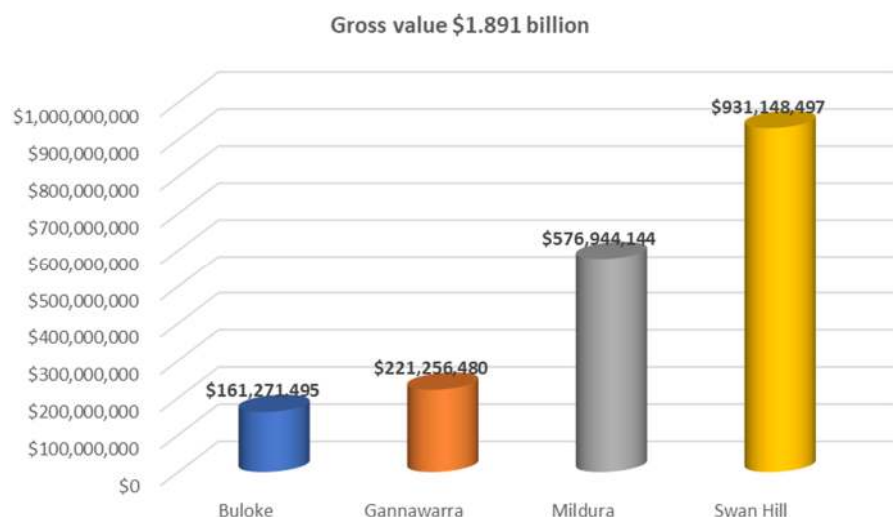




Figure 3:
Agriculture Value by Major Segments



Figure 4:
Jobs in Food:
Mallee LGAs (% of total jobs in each LGA, 2016)

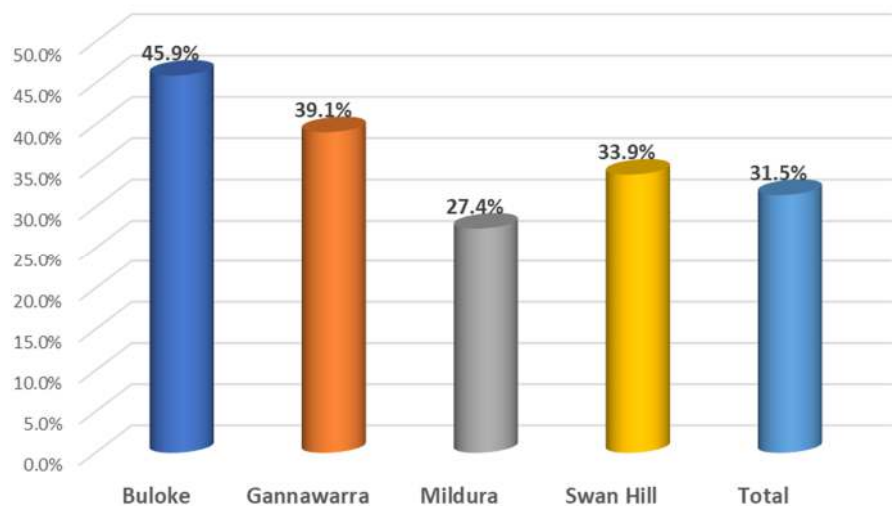


Figure 4 shows the proportion of jobs in food industry sectors (agriculture, processing/manufacturing, logistics, wholesale/retail and food service) across the Mallee's four local government areas.

Final

