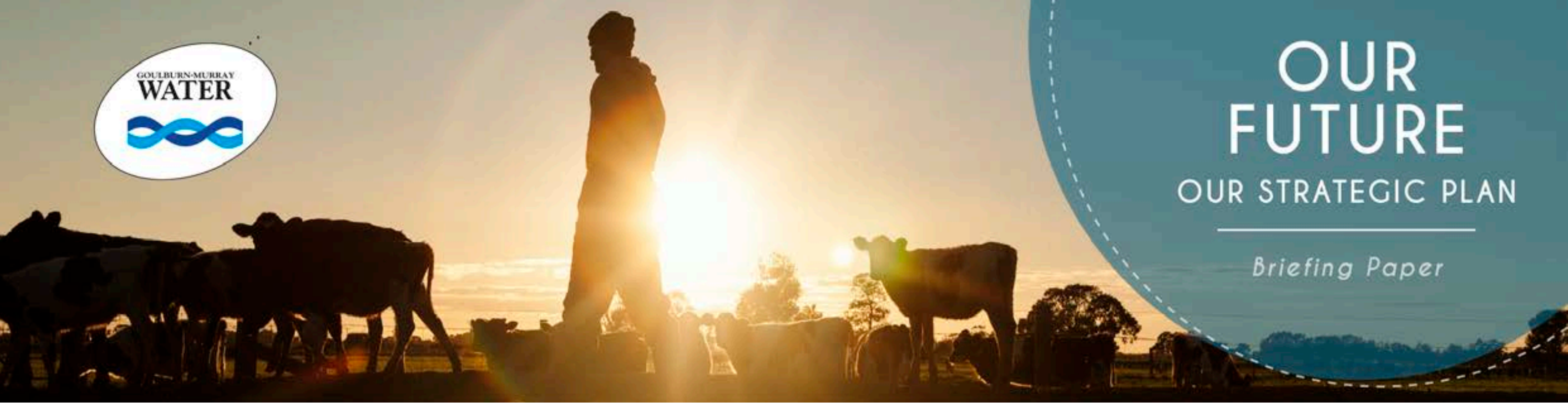


4. Industry snapshot: Specialist and emerging

Key takeaways

- In addition to its major industries, GMW's region is home to an increasingly diverse range of agribusinesses
- By comparison with more established industries, some specialist and emerging industries are more profitable and faster growing
- Potential high growth industries include walnuts, cotton and vegetables

Overview

Rather than focus on a single industry, this snapshot provides broad coverage of a host of industries that are considered either specialist or emerging. These industries are at varying stages of their respective lifecycles, have varying water needs and varying economic value to GMW's region now and in the future.

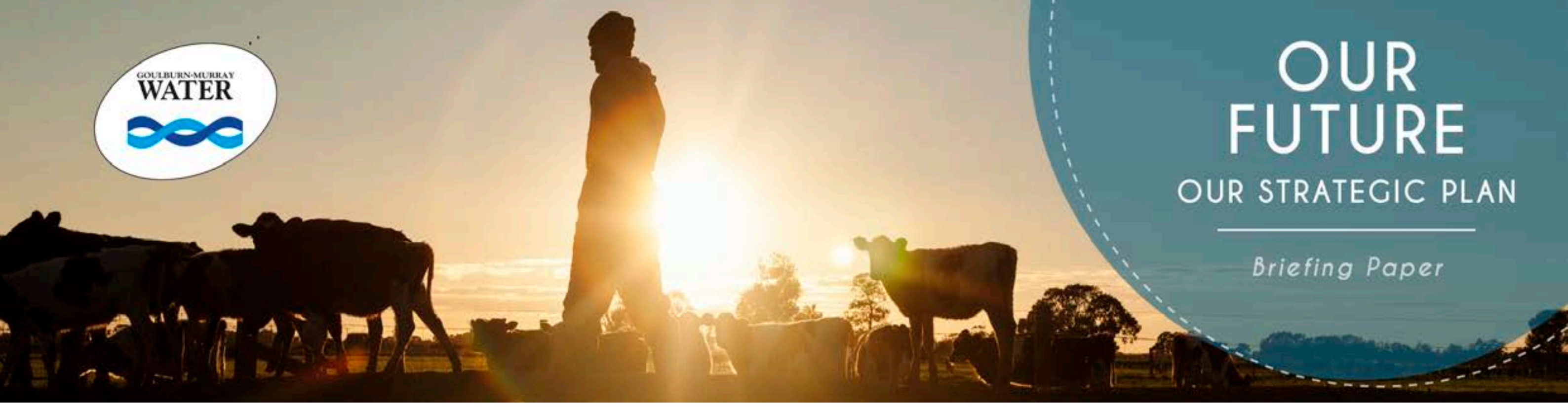
Many of these sectors rely on rural water supply and contribute significant value to the Victorian agribusiness sector. Sensitive to seasonal fluctuations, crops can be established quickly in response to higher prices and scaled down or transitioned to other crop types when prices fall. Some sectors are immature but have strong growth potential others are mature as industries (though may be at an earlier stage of development within GMW's region). As a result of their generally lower level of maturity, many of these industries require research and development or innovation investment to assess and improve viability prior to being scaled to commercial size.

Industries

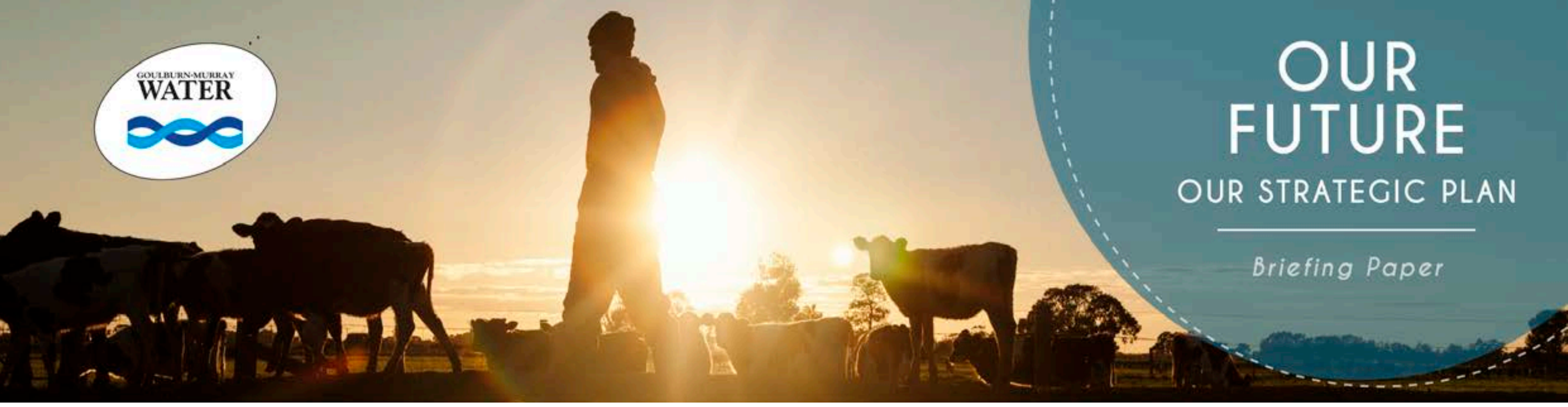
The table below summarises key data for a number of high value, intensive industries.

Industry	Lifecycle stage	Attributes	Annual Revenue*	Profit Margin	Utility share of costs^	Wage share of costs[&]	Forecast annual growth[#]	Drivers of future path
Piggery[1]	Growth	• Very capital intensive • Many small players • In Victoria, higher pig numbers per farm	$312M	13.0%	1.6%	7.0%	4.5%	• Industry competition • Globalisation
Poultry[1]	Maturity	• Very capital intense • Low level of concentration	$154M	9.4%	10.1%	10.6%	1.2%	• Per capita consumption growth • Price stagnation
Camel dairy[2,3]	Introduction	• Extremely small market to-date • Extremely high price to consumers (~$20/L)	n/a	n/a	n/a	n/a	n/a	• Consumer awareness and demand • Household disposable income

[1] IBIS World, 2016
[2] http://www.sunshinecoastdaily.com.au/news/qcamel-hoping-to-tap-into-white-gold-sales/2384504/
[3] http://www.abc.net.au/news/2014-02-28/camel-feature-wa/5291792



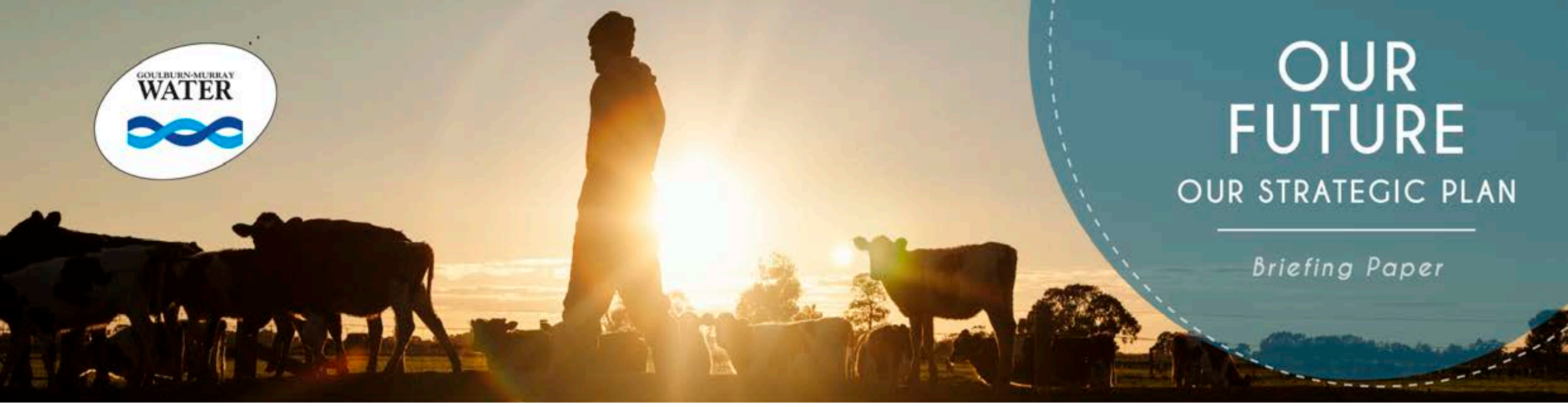
Industry	Lifecycle stage	Attributes	Annual Revenue*	Profit Margin	Utility share of costs^	Wage share of costs[&]	Forecast annual growth[#]	Drivers of future path
Grape growing[1]	Maturity	• Large number of small operators • Many operators unprofitable	$255M	15.7%	2.9%	18.4%	2.5%	• Oversupply of grapes expected to ease • Production costs expected to rise
Wine production[1]	Maturity	• Capital intensive • Persistent oversupply has impacted profitability	$1,655M	3.2%	2.2% (3.8%)	16.7% (14.6)	2.4%	• Alcohol consumption falling • Demand in key export markets • Domestic price of wine grapes
Outdoor vegetables[1]	Maturity	• Low degree of concentration • Capital intensive • Low demand volatility	$586M	7.2%	2.0%	13.8%	1.3%	• Fruit and vegetable consumption • Health consciousness • Level of rainfall • Market power of supermarkets
Indoor vegetables (hydroponics)[1]	Maturity	• Capital intensive • Highly competitive • Technology driven	$90M	6.9%	8.0%	21.0%	1.9%	• Level of rainfall • Market power of supermarkets • Price of fertiliser
Walnuts	Growth	• Technology driven • High return on investment per hectare • World demand for nuts is growing at about 4% a year	$30M (Australia-wide)	n/a	n/a	n/a	n/a	• Industry competition • Globalisation
Cotton	Introduction	• Extremely small market to-date • Not commercial scale or produced large enough volumes	n/a	n/a	n/a	n/a	2.4%	• Water availability
Bottled water[1]	Maturity	• Highly concentrated market • Stable revenues • Capital intensive	$163M	18.3%	2.1% (3.8%)	12.9% (14.6%)	2.4%	• Environmental concerns • Industry consolidation



Industry	Lifecycle stage	Attributes	Annual Revenue*	Profit Margin	Utility share of costs^	Wage share of costs[&]	Forecast annual growth[#]	Drivers of future path
Medicinal marijuana and poppies[4]	Introduction	• 3 registered businesses in Australia; 1 operating • State regulations define opportunities	n/a	n/a	n/a	n/a	Est. $1B market potential	• Enabling legislation and regulation
Floriculture (flowers, foliage, seeds)[1]	Decline	• Mostly located in Southern Victoria • Small (80% employ less than 20 people)	$104M	4.8%	5.4%	19.5%	-1.4%	• Consumer sentiment • Road freight costs • Price of fertiliser
Organics[1]	Growth	• Small scale operations • Growing demand	$211M	17.7%	1.3%	14.2%	5.4% (2017-22)	• Volatility in rainfall • Increasingly health conscious society
Turf[1]	Maturity	• Low level of concentration • Highly competitive • Low barriers to entry	$28M	7.8%	3.2%	13.0%	1.4%	• Growing popularity of artificial turf
Aquaculture[1]	Maturity	• High barriers to entry • Capital intense	$29M	11.7%	2.6%	17.8%	1.7% (2017-22)	• Domestic price of seafood • Real household disposable income • Demand from seafood processing
Pyrethrum[5,6]	Growth	• Australia has 75% of global market • Highly concentrated	n/a	n/a	n/a	n/a	5.9% (2014-19)	• New product development • Global demand • Social desire for natural products
Horse farming[1]	Maturity	• Very capital intense • Low level of concentration • Highly competitive	$249M	8.2%	2.8%	7.1%	0.6%	• Owner-occupiers increasingly exiting • Consolidation in thoroughbred segment

Notes:
** Victorian unless otherwise stated*
[#] 2016-2021 unless otherwise stated
^ Average of 1.7% unless otherwise stated; includes both energy and water costs
[&] Average of 7.5% unless otherwise stated

[4] http://www.smh.com.au/business/medical-marijuana-poised-to-become-boom-local-industry-20150610-ghkozx.html
[5] http://www.abc.net.au/news/2014-02-03/pyrethrum-insecticide-crops-botanical-resources-australia/5234186
[6] http://www.prnewswire.com/news-releases/global-pyrethrin-market-2015-2019-with-bayer-cropscience-botanical-resources-of-australia-horizon-sopyrwa-kapi-mclaughlin-gormley-king-company-mgk--valent-dominating-300170101.html



Trends

Urban expansion delivering lifestyle changers to GMW's region

- Growth and higher land values on Melbourne's suburban fringe incentivising existing operations to relocate
- Parts of GMW's region (laying within short logistical range of Melbourne) are attractive alternatives

Source: GMW internal analysis

Small block sizes attracting small-scale, niche operations

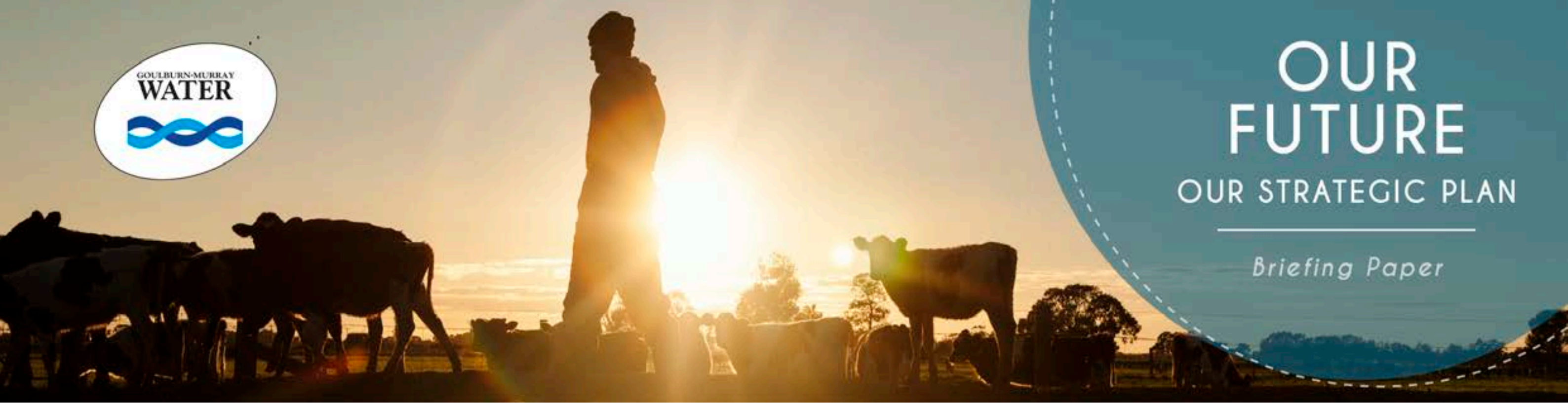
- While many of these operations use relatively small amounts of water, some have the potential to contribute significantly to regional economic development through employment and capital investment
- Particularly relevant to industries such as: floriculture, organics and turf

Source: RMCG, 2016

Research and development institutions exploring opportunities

- The Victorian Department of Health has approved global pharmaceutical company GlaxoSmithKline (GSK) conducting six small-scale poppy trials in northern and western Victoria.
- CSIRO developed a number of new grape varieties better suited to Australian growing conditions, with good productivity and desired wine aroma and flavour characteristics
- CSIRO cotton research targeted at improving the sustainability, productivity, fibre quality and distinctiveness of the Australian cotton crop

Source: CSIRO, 2016; ABC Rural, 2013



References

1. **Victorian Department of Economic Development, Jobs Transport and Resources.** *Safe & Accessible Victorian Waterways.* s.l. : The Victorian Department of Economic Development, Jobs Transport and Resources, 2016.
2. **ABC Rural.** Victoria could be first mainland state to grow opium poppies. *Rural.* [Online] 2013. http://www.abc.net.au/news/2013-07-19/high-on-poppy-potential/4830760.
3. **CSIRO.** Alternate winegrape varieties . *Growing robust frops.* [Online] https://www.csiro.au/en/Research/AF/Areas/Plant-Science/Wheat-barley/BARLEYmax?ref=/CSIRO/Website/Research/Farming-food/Growing-robust-crops/BARLEYmax.
4. **Horticulture Innovation Australia.** *Strategic plan.* April 2016.
5. **Australian Bureau of Statistics.** *46180DO004_201415 Water use on Australian Farms.* [Online] 2014-15. http://www.abs.gov.au/ausstats/abs@.nsf/webpages/Adobe+Reader?opendocument.
6. **Austnuts.** *Victorian Nut Industry.* [Online] http://www.austnuts.com.au/victoria.html.
7. **Australian Nut Industry Council (ANIC).** Growing tree nuts in Australia. [Online] http://www.nutindustry.org.au/growing-tree-nuts-in-australia.html.
8. **CSIRO.** *Cotton research from seed to shirt: The challenge.* [Online] https://www.csiro.au/en/Research/AF/Areas/Plant-Science/Cotton?ref=/CSIRO/Website/Research/Farming-food/Growing-robust-crops/Cotton.