

## Agricultural Competitiveness Issues Paper

17 April 2014

### Wimmera Development Association

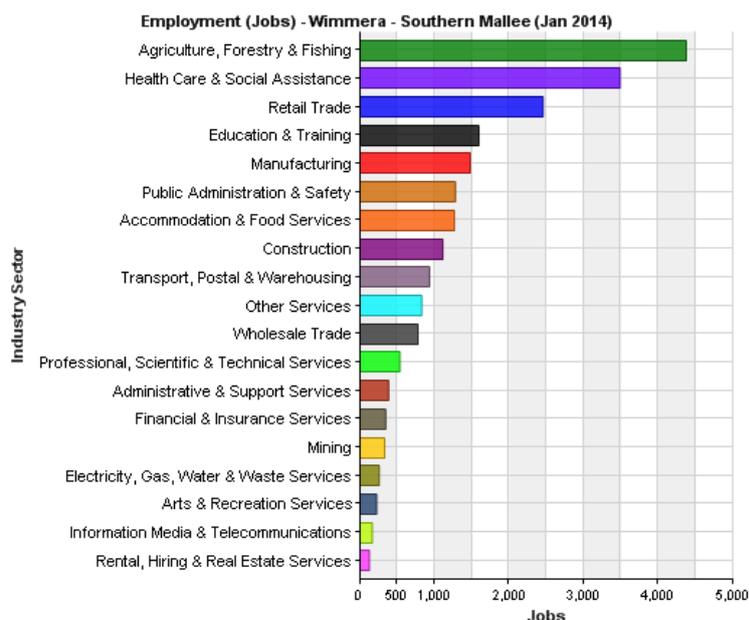
Wimmera Development Association represents the municipalities of West Wimmera, Hindmarsh, Yarriambiack, Northern Grampians and Horsham. The region consists of the regional centre of Horsham, and a range of smaller communities servicing the agricultural sector.

The Wimmera Southern Mallee is a prime grain production region, producing significant exports. The economy of the whole region is closely aligned to the success of agriculture, evidenced by the impact of seasonal variability and global commodity prices on the whole region.

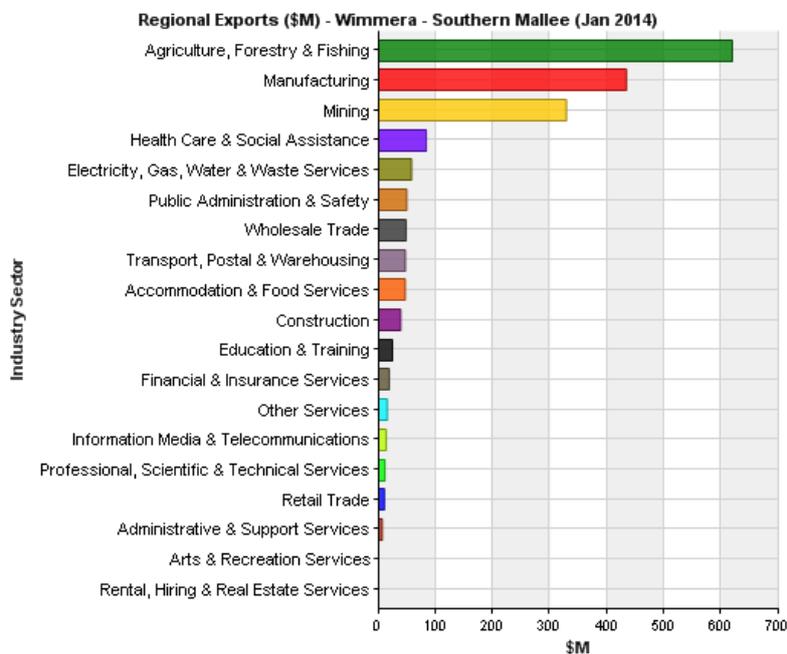
The context of agriculture as the primary driver of the regional economy is well understood in the region. The extended drought in the early 2000s demonstrated the close relationships between the regional service and retail sectors and the variability of agricultural productivity in driving investment and employment in the region.

In support of agriculture, the region has identified key infrastructure development, education and training, value adding to primary production and grains research as key activities to support the future sustainability of the sector and the region.

Key regional indicators demonstrate the value of agriculture to the region. Agriculture is the largest employment sector in the region, with increasing specialization in the agronomic and support services sector. Whilst employment numbers are decreasing as farm size increases and technology increases, the demand for skilled agricultural employees cannot be satisfied. Specialist skills and contracted services provide growth career and business opportunities, in support of agricultural enterprises.



Whilst seasonal indicators and international markets influence the value of the region’s exports, agricultural commodities are by far the largest contribution from the region to the Victorian and Australian economy.



### Victorian Context

The attached table documents the Victorian context of the range of crops produced in the region, by hectare estimates for 2012 and 2013. It demonstrates the strength of the region (and its contribution to the national balance of trade).

Victorian grain exports were valued at \$2.2 billion in 2012-13, and accounted for 17% of the value of Australia’s grain exports. Indonesia was the biggest importer of Victorian grain in 2012-13, buying an impressive \$261 million worth of product. China increased its imports by \$191 million with \$249 million in grain sales from Victoria for the year. The third major export destination was United Arab Emirates which received \$216 million worth of Victorian grain during the year, the majority of which was canola for crushing. Other export destinations included Pakistan (\$155 million), Belgium (\$152 million) and Malaysia (\$101 million). Cereals made up about half the value of grains exported from Victorian with more than \$1 billion worth of cereals sold. Oilseeds were about one third of exports and totalled \$715 million which was nearly double “the previous year and reflected the strong canola production in Victorian that season. Pulses made up about 9 per cent of exports and totalled \$195 million.

## Victorian Area and Harvest Estimates

	<b>Total area 2012</b>	<b>Total area 2013</b>
Wimmera	1072565	1097194
Mallee	1390705	1355503
State total	3403544	3419060
<b>Region</b>	<b>Area Estimate 2012 (ha)</b>	<b>Area Estimate 2013 (ha)</b>
<b>Wheat</b>		
Wimmera	352393	352393
Mallee	665678	645707
State total	1423445	1419034
<b>Barley</b>		
Wimmera	320754	336792
Mallee	429030	450482
State total	947163	989602
<b>Oats - assume 25 per cent is harvested</b>		
Wimmera	33000	33000
Mallee	49500	44550
State total	214500	209550
<b>Triticale</b>		
Wimmera	10910	10910
Mallee	20430	20430
State total	61227	61227
<b>Canola</b>		
Wimmera	101850	101850
Mallee	132000	88440
State total	400044	362065
<b>Lentils</b>		
Wimmera	58914	53023
Mallee	14233	14945
State total	73345	68165
<b>Chickpeas</b>		
Wimmera	49095	54005
Mallee	6538	7845
State total	55933	62150
<b>Faba Beans</b>		
Wimmera	51823	54414
Mallee	1362	1362
State total	54910	57501
<b>Lupins</b>		
Wimmera	6546	6546
Mallee	18000	18900
State total	27958	28858
<b>Field Peas</b>		
Wimmera	26184	20947
Mallee	13075	11768
State total	40730	34185
<b>Vetch - assume 25 per cent is harvested</b>		
Wimmera	61096	73315
Mallee	40860	51075
State total	104288	126722
		<b>Total cropped area</b>
		3419060

## Grains Research

Agricultural research in the Wimmera Southern Mallee, focussed on grains research and development, is an important element in the sustainability of agriculture in the region. It is critical to the ongoing growth and diversification of our food production, given population projections, export targets and climate variability.

Increased productivity in the agricultural sector is dependent on the development and application of research into agricultural commodities, including value adding. Agricultural research is now a global industry, dependent on an environment of competitive funding and commercial interests. A government role in strategically planning for basic research and to support priority activities is required.

The provision of up to date relevant information regarding government policy, global trends and emerging opportunities is critical to raise awareness across the food sector. The recent focus on 'Food to Asia' and the emerging 'dining boom' opportunities in China and other Asian trade partners has promoted food security and raised the profile of food producers.

The linkages between productivity and research are well established. Traditionally primary producers have been innovative and solution focussed, with early adoption of new technologies. Promotion and sharing information within the sector is critical to ongoing innovation and development of technology to support increased productivity and enable producers to match their production to new and emerging market trends.

A key success factor in the region is the significant and growing investment in grains research. The region has attracted substantial international investment and national strategic focus through grains research. This is evidenced by the recent launch of the Australian Grains Genebank in Horsham, a joint initiative of the Victorian Department of Environment and Primary Industries (DEPI) and the Grains Research and Development Corporation (GRDC). The new genebank has capacity for up to 200,000 grains samples, and is designed to acquire, conserve, characterise and distribute grain crop genetic resources to scientists and breeders in Australia and globally for plant breeding research. Significant government and international investment in grains research has been boosted by recent initiatives. The construction of a high throughput phenomics glasshouse by DEPI, the \$14million wheat breeding station by Bayer CropScience (one of seven global sites) and the investment of \$3million in glasshouse upgrades by Nuseed are examples of the high level of interest and activity in the sector.

The region hosts a significant number of national and international researchers. Research personnel are generally more highly qualified than the regional community as a whole. A number of them have international backgrounds – living and working (often with their families) in countries around the world before settling in Australia. Issues identified reflect similar concerns to other groups in the region and include settlement of families into a regional community, appropriate work for spouses, accessing appropriate cultural activities and ongoing training opportunities.

Support for young people entering the research sector through post-graduate studies or direct employment is of concern to many regional researchers. Easy access to training support and

difficulties in demonstrating career pathways in the sector are barriers to young people committing to regional research.

### **Wimmera Mallee Pipeline Opportunities**

Construction of the Wimmera Mallee Pipeline has secured the region's water supply, for stock and domestic purposes. The impact of future climate variability will be tempered by the increased security of supply across the whole region.

Access to good quality water from the pipeline, following the extended drought of the early 2000s, is now being incorporated into development planning by primary producers. Opportunities for on-farm diversification include intensive animal production (sheep, poultry, pork and beef), as well as the extension of viticulture in some areas.

The pipeline has provided a level of confidence in the region's future and the sustainability of agriculture. As the debt legacy of the drought period is addressed, more primary producers will have the confidence to plan for value add activities.

The Wimmera Mallee Pipeline offers a sound base for increased food processing in the region. Export grains leave the region with very little processing - often as bulk commodities, and the opportunities for significant value adding to these grains is acknowledged as a regional priority.

### **People and Skills**

Longerenong College is a highly valued training facility in the region, providing vocational education and training to the agricultural sector for south eastern Australia. It is situated on 1,070 hectares, 13 kilometres from Horsham in the Wimmera region of western Victoria. It has been providing specialised agriculture and related education and training for over 121 years. It is one of the few broadacre dryland farming training facilities in Victoria, and indeed Australia. It provides students with the unique opportunity to learn and socialise in an educational environment supported by a fully functioning commercial farm.

The regional community and Victorian Government are currently seeking federal support for the upgrade of the student facilities at the college, in support of increased student numbers and the development of research facilities at the college.

Collaboration between research activities and universities has been significant. Melbourne University partnerships with regional organisations and research activities has been highly valued and delivered through joint ventures and investment attraction. LaTrobe University through its soils and plant science programs, have been a contributor to grains research activities. Ballarat University has been actively involved in sustainability and optimization research within the Wimmera Southern Mallee.

The development of an applied agricultural degree has been discussed widely within the region. It would provide for the full range of agricultural education in the region, building on the success of the

VET offerings of Longerenong College and potentially providing a segue into regional research. It would also support existing research staff to undertake further study and qualifications in the region.

There is strong support for the proposal to locate PhD students at DEPI in support of research activities. A graduate internship program exposes scientists to regional opportunities for research, demonstrating the opportunities in regional Australia.

The need to promote research activities to primary producers to increase awareness of the value of research to the sector was also identified. For example, promotion of the range of crop trial sites, building an appreciation of the connections between grains research and their production, is important, given the level of industry support for research via the GRDC levies.

Birchip Cropping Group (BCG) is a not for profit agricultural research and extension organization led by farmers in the Wimmera Southern Mallee. It is internationally recognized for leading innovation and extension activities, and conducts field days and expos to regional farmers. It provides a broad range of information services including soils, market research, human resource management and training, farming systems and data management.

Attracting skilled and semi-skilled people to regional Australian agriculture can be challenging. Education and training targeting young people to consider a career in food, needs to be balanced with skilled migration to address specific skill gaps and seasonal programs to support the labour needs of production cycles.

### **Freight and Logistics**

Major freight routes, including the Melbourne to Adelaide rail line and the Western Highway, provide a backbone for the movement of export and domestic grains produced in the Wimmera Mallee region. The network of minor rail lines, secondary highways and roads support the accumulation of grain to central receival points.

The construction of the Wimmera Intermodal Freight Terminal, with the funding support of the Victorian Government and the Federal Government, has been a strategic investment in the freight network. It has improved the effectiveness of the road/rail interface, and will attract increased containerised grain (and possibly mineral sands in the future) transport.

Maintenance and upgrade of the network is a critical issue, directly related to the efficiency and competitiveness of the sector in both domestic and export markets.

Local Government and industry advocacy is united in campaigning for

- The continuation of the duplication of the Western Highway between Buangor and Stawell. The freight task on this highway is growing, with community safety issues, as well as cost effectiveness of road transport for grains and other produce. The duplication reduces travel time between the region and the Port of Melbourne and markets.
- Maintenance of the rail lines is critical to the efficiency of transporting grain to markets. Critical issues include the congestion in the metropolitan system, port access and 'last mile' (in)efficiencies, weight and speed restrictions due to maintenance of the infrastructure, and of course the inefficiencies of the dual gauge systems.

- Long term planning for the increased productivity of the agricultural sector and export potential should include an integrated road/rail system and accessible port infrastructure.

### **Weather Data**

Given the direct relationship between agriculture and the weather, it is critical that farm managers and their advisors are able to accurately plan their activities to maximize the economic benefits from their inputs. Timing of many agricultural activities is reliant on weather information to maximise the benefits of the activity and minimize potential negative environmental impact.

For example accurate information about the timing of rain events can assist the scheduling of agricultural spraying – rain can nullify the chemical efficacy therefore rendering the significant investment in chemical void. The cost to apply the spray would also be lost eg fuel, time and machinery costs.

As identified in the Wimmera submission to the Bureau of Meteorology and the Federal Government in 2010, access to ‘real time’ weather information to improve decision-making can have significant impact on the ‘bottom line’ of agriculture, and the regional economy. For example, a one percent increase in production across the region could add \$7.723 million to the value of agricultural production exported in 2010. This equates to the approximate ten year capital and operating cost of a new radar facility for the region.

### **Access to Mobile Phone and Broadband**

Wimmera Development Association undertook a research project in 2013 to investigate the use of mobile data in the agricultural sector. The following comments are taken from the executive summary of “Wimmera Southern Mallee Remote Data Use In Agriculture” 2013 (full report available at <http://www.wda.org.au/images/Remote%20Data%20Use%20in%20Agriculture%20-%20Final%20Report.pdf>)

*“Agriculture is fast becoming one of the most technologically advanced industries in Australia, with some of the lowest levels of phone and data reception. Farmers need up to the minute reliable information, to make informed decisions, and to get the most from efficiency improving technology. The National Broadband Network (NBN) stands to unlock a huge potential for technology development in this industry” (anonymous survey participant).*

*The Wimmera Development Association (WDA) identifies agriculture as the largest industry sector in the region in terms of employment, expenditure, gross revenue and regional exports. Given its significance in the local economy, agriculture in the Wimmera Southern Mallee needs to stay attuned to the exciting opportunities existing and emerging in the digital economy.*

*This project undertook extensive regional survey work to benchmark the current use of information and communications technology (ICT) in the agricultural sector of the Wimmera Southern Mallee region.*

*Approximately 50 % of survey respondents in this project rated the potential benefit of all ICT applications surveyed as above average, even where they did not use the technology. This indicates that many respondents are aware of current and emerging ICT in agriculture.*

*Primary producer ownership of smartphones in the region is above the national average. However, there is a large variation as to how and where they are used. There is reasonably high uptake of advanced internet use and cloud computing applications in some business sectors. The uptake of more recently emerged technologies such as high definition (HD) cameras, remote machinery control and aerial observation, is less advanced.*

*The two most common barriers to adopting ICT were poor mobile phone reception and low internet speed. Both are critical to harnessing the full ICT benefits that the digital world continues to offer. This is particularly so with respect to services from a mobile device.*

*A large percentage of survey respondents in each business sector are unaware, or find it difficult to quantify, what the benefits will be of introducing a high speed broadband service, i.e. the National Broadband Network (NBN), to their community. This reinforces that regular awareness and training will be important to continue to engage the agricultural sector and ensure ICT efficiencies are adopted. Improving connectivity will assist in enhancing business profitability and sustaining communities disadvantaged by remoteness. "Quality mobile service is restricting my profitability by around 4 % to 5 %" (Anonymous survey respondent, Nov 2012).*

*There are a number of key strategic initiatives that WDA can employ to ensure that agriculture in the Wimmera Southern Mallee region stands ready to embrace ICT in the digital economy. These initiatives are focused around awareness, engagement, training and adoption.*

### **Drought Preparedness**

Government support to primary producers should focus on risk management and building capacity in the sector and its businesses to manage climate variations. The Intergovernment Agreement on National Drought Program Reform 2013 is an improvement, moving away from the requirement for formal declarations by government(s). Implementation should be monitored closely to ensure that it builds effective risk management responses at enterprise level and provides the necessary level of support to producers during drought periods.

Critical to the success of this new agreement is the collaboration between all levels of government in planning and implementing support to the agricultural sector.

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