

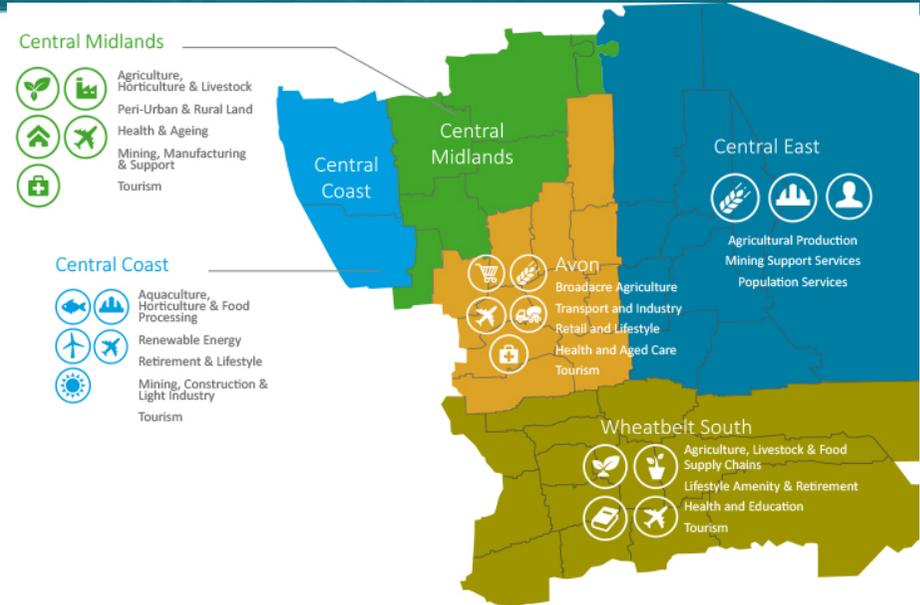
## Wheatbelt Snapshot Series: Horticulture

### OVERVIEW

The Wheatbelt region comprises an area of 154,862 square kilometres, extending north to Dandaragan and Dalwallinu, east to Yilgarn and Lake Grace and south to West Arthur. The Region comprises 42 local government authorities and in excess of 100 communities.

Horticulture value of agricultural production in the Wheatbelt increased from \$87.86 million in 2007-08 to \$93.23 million in 2011-12<sup>1</sup>, representing 11.73% of Western Australia's horticultural worth. Within the Wheatbelt, there are prominent suppliers of fruit and vegetables for domestic and international markets. The proximity of the Wheatbelt to Perth and the existence of potentially unhindered land close to key infrastructure and transport routes facilitate future expansion in the Region. Additionally, the Region's niche production of safe and quality food coupled with easy access to ports at Fremantle and Geraldton and Perth International Airport highlight the Wheatbelt as a prominent supplier for international markets particularly South-East and East Asia.

<sup>1</sup> Including nurseries and cut flowers; ABS 2011, Value of Agricultural Commodities 2011-12, Wheatbelt Region, Western Australia



**Figure 1: Wheatbelt Region and Sub-Regional Key Economic Opportunities (WDC 2012)**

The Central Midlands and the Central Coast Sub-regions are increasingly involved in intensive horticultural activities, as urban expansion pushes the industry out of its traditional areas around the north metropolitan area. Growth of the northern corridor, coupled with high rainfall, a range of suitable soil types, ample groundwater and proximity to markets gives the Central Coast and Central Midlands significant potential capacity for annual and perennial horticultural development.

The Wheatbelt produces a variety of horticultural food, including but not limited to the following:

## VEGETABLES

Vegetable production in the Wheatbelt has been growing over the last decade. In 1994-95, vegetable production was valued at \$2.1 million (13.1% of the State's total), and in 2003-04 this increased to \$26.2 million<sup>2</sup>. In more recent times, the Wheatbelt vegetable production value grew by 70% from 2007-08, to \$56.4 million (15% of the State's total) by 2011-12<sup>3</sup>, being led by the major cultivation of carrots and lettuce. The 2011-12 production value for the major leading vegetables produced in the Wheatbelt can be seen in Table 1.

**Table 1: Wheatbelt production value of major vegetables**

Source: ABS 2011, Value of Agricultural Commodities 2011-12, Wheatbelt Region, WA

Vegetables Produced	Wheatbelt vegetable production value
<b>Carrots</b>	\$35.1 million
<b>Lettuce</b>	\$9.2 million
<b>Broccoli</b>	\$2.9 million
<b>Potatoes</b>	\$2.4 million
<b>Onions</b>	\$1.4 million

## CARROTS

High levels of mechanisation and favourable production conditions make the export carrot industry the largest vegetable sector in Western Australia. Carrot production has become more

<sup>2</sup> Department of Local Government and Regional Development, Wheatbelt Economic Perspective: An update on the economy of Western Australia's Wheatbelt Region

<sup>3</sup> ABS 2011, Value of Agricultural Commodities 2011-12, Wheatbelt Region, Western Australia

concentrated, with companies self-packaging for export. In 2009, carrot exports added \$8.6 million to the State economy, which equates to 46% of the value-added by total exported commodities<sup>4</sup>. In 2011-12, the Central Coast Sub-region had high gross production value for carrots, valued at \$19.3 million<sup>5</sup> representing almost 55% of the Wheatbelt's total carrot production value.

## FRUIT

Fruit production in the Wheatbelt has had strong steady growth since 1994-95 when the value was \$5.4 million and represented 5.1% of the State's total production<sup>6</sup>. By 2003-04, total fruit production had increased to \$14.9 million (5.5% of the State's total) and recent statistics in 2011-12 indicate the Wheatbelt's fruit production value grew to \$19.1 million<sup>7</sup> (12.1% of the State's total). It is led by the rapid growth in citrus fruit including oranges and mandarins. The 2011-12 production value for the major leading fruit produced in the Wheatbelt can be seen in Table 2.

**Table 2: Wheatbelt production value of major leading fruit**

Source: ABS 2011, Value of Agricultural Commodities on 2011-12, Wheatbelt Region, WA

Fruit Produced	Wheatbelt fruit production value
<b>Citrus – oranges, mandarins</b>	\$6.68 million

<sup>4</sup> Department of Agriculture and Food 2009, Plans to support horticulture industry development 2009-12, Western Australia

<sup>5</sup> RPS 2014, Central Coast Sub-Regional Economic Strategy

<sup>6</sup> Department of Local Government and Regional Development, Wheatbelt Economic Perspective: An update on the economy of Western Australia's Wheatbelt Region

<sup>7</sup> ABS 2011, Value of Agricultural Commodities 2011-12, Wheatbelt Region, Western Australia

<b>Grapes</b>	\$3.99 million
<b>Stone fruit – Peaches, Nectarines</b>	\$2.76 million
<b>Orchard fruit – Avocados, Mangoes</b>	\$1.90 million
<b>All other orchard fruit and nuts- including olives</b>	\$2.18 million

In the Shire of Gingin, irrigated horticulture for fruit production is dominated by olives and grapes, while further north throughout the Shires of Dandaragan and Moora there are several major operations of citrus, mangoes and stone fruit; Moora Citrus and AgriFresh are two major citrus organisations based around the town of Moora.

## OLIVES

The Moore River Region (Gingin, Dandaragan, Guilderton) and the Avon (York, Beverley, Toodyay) are two of six main areas for olive production in Western Australia<sup>8</sup>. The Moore River Region has experienced growth in olive production due to the availability of underground water and large affordable areas of land with well drained soils; as a result, the Region now accounts for approximately 70% of the State's trees and production<sup>9</sup>.

<sup>8</sup> Department of Agriculture and Food 2009, Plans to support horticulture industry development 2009-12, Western Australia

<sup>9</sup> Department of Agriculture and Food 2009, Plans to support horticulture industry development 2009-12, Western Australia

## EMERGING HORTICULTURAL OPPORTUNITIES

The opportunities to expand horticulture in the Wheatbelt should have a focus on value-add to regional produce, increasing the entrepreneurial base of producers while advocating industry needs and developing regional, state, national and international markets.

It is important to understand the market demand from high importing countries such as those in East and South East Asia. By doing so, it positions the Wheatbelt for short and medium-term strategies to capitalise on the opportunities presented in Asian markets as they secure food supplies for their growing population. The Coriolis *Target Market Opportunities in Asia for Western Australian Premium Products* Report (2016) identified the top horticulture foods produced in WA that have 'high growth, high potential opportunities' for export into Asia

The top identified horticulture-based foods produced and exported to Asia included<sup>10</sup>:

- Mandarins
- Oranges
- Apples
- Carrots
- Avocados
- Virgin olive oil

Transforming current production of raw materials into value-added processed foods and beverages has the potential to add significant value to the Wheatbelt's horticulture industry. The retail sector currently contributes 39% of added value to horticultural products in

<sup>10</sup> Coriolis 2016, Target Market Opportunities in Asia for Western Australian Premium Products

Western Australia<sup>11</sup>, and for some industries this includes a considerable processing component such as packaged salads, prepared meals, chips and crisps etc. Transforming horticultural produce is likely to continue as more supermarket shelf products become pre-packaged and value-added for convenience, food safety and security.

## **ISSUES**

### High labour requirements

A lack of labour available to support vegetable and fruit production puts the northern growth corridor at a disadvantage for horticultural development in the Wheatbelt. Horticulture is the most labour intensive of the agricultural industries, with regional areas currently relying on temporary migrant workers for employment. This is mainly due to the unwillingness of local workers to perform low skilled jobs, exacerbated by the outwards migration of young people from these regional centres in favour of an urban lifestyle.

### Competitiveness

Export opportunities for the Wheatbelt horticulture industry are positive, yet the industry is being out-competed by its international competitors. The State faces strong competition in export markets from other southern hemisphere suppliers such as New Zealand, South Africa and Chile, the last two having considerable cost savings over Western Australia and the Wheatbelt due to cheap labour.

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<sup>11</sup> Department of Agriculture and Food 2009, Plans to support horticulture industry development 2009-12, Western Australia

### Lower long-term groundwater allocation due to urban encroachment

The Wheatbelt has significant fresh groundwater and surface water available, particularly in the coastal areas throughout Dandaragan, Moora, Gingin and Victoria Plains. However, suburban expansion north of Perth and the ongoing growth in horticultural production through Perth's northern corridor will increase demand for quality groundwater resources, potentially leading to uncertainty over groundwater allocations.

The availability of water for existing and potential uses, especially horticulture, is already a major issue for the State. The survival and growth of the industry has become more dependent on groundwater resources for irrigation purposes as climate becomes increasingly harsh in summer months. A lack of water has impacted the opportunities for expansion further southward in the last decade, seeing a re-set on groundwater allocation limits across the South West in 2009 by the Department of Water<sup>12</sup>.

### Climate change

Climate change has the potential to impact on horticulture production in a number of ways unless economic and environmental management systems are put into practice. Rising temperatures, declining annual rainfall and extreme weather events are some overarching risks to horticulture in the Wheatbelt. Increasing temperatures may lead to crop damage impacting on yield, and potentially increase energy costs for post-harvest activities such as chilling. A decrease in annual rainfall will lessen

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<sup>12</sup> Department of Water, 2014, Water for Growth: An overview of current and future water management plans in Western Australia

the soil moisture and inhibit plant growth whilst extreme weather events will increase the risk of crop and infrastructure damage.

## **SOLUTIONS**

### Investment in processing and food labelling

To improve the attractiveness of the Wheatbelt's horticultural produce to Asian markets, five necessary innovations should be considered. These include:

1. Longer shelf life;
2. Post-harvest packaging;
3. Reduced costs in manufacturing process;
4. Increased resonance with environmentally conscious consumers; and
5. Culturally inspired advertising and packaging.

### Investment in key infrastructure

Investment in infrastructure around the Wheatbelt is imperative to enable and facilitate growth opportunities and access to export markets, increasing the Region's global competitiveness. Three key areas for investment to help grow the industry should include:

1. Centralised processing and packaging precincts including smaller processing hubs;
2. Road infrastructure; and
3. Telecommunications.

### Workforce attraction and retention

The *Wheatbelt Regional Investment Blueprint* identifies the possibility of developing a new knowledge economy with other global businesses by utilising best practice local knowledge in land-

based production, including horticulture. Currently, the Wheatbelt has world class knowledge networks in dry-land agriculture and horticulture, including agricultural colleges in Narrogin and Bindoon, and the Muresk Institute for education, research and training which specialises in agriculture and agribusiness. Metropolitan-based universities also offer horticultural studies to students; the University of Western Australia offers Masters and Bachelors degrees majoring in Horticulture, while Murdoch University offers Certificate qualifications in horticultural studies.

To maintain the industry's labour force and encourage younger people to work in horticulture, there needs to be continued investment and implementation of strategies linked to career development and support, such as improved access to training and skills development.

### Retaining premium standards

The Wheatbelt's existing food quality standards and high food safety ratings will increasingly be the point of difference with international competitors in domestic and export markets. For access to these premium markets nationally and internationally it is therefore important for the Wheatbelt's horticultural industry to enable ongoing growth. Regional collaboration between Local Governments would help to achieve this by allowing consistent pest control management across sub-regions, other important considerations when accessing export markets. New high-value markets and industries will need to be identified and captured as they emerge, to capitalise on their growth and development.

### Investment in groundwater resources

Long-term strategies are needed to ensure future scheme needs are met so horticulture expansion and development can continue. The current process for allocating water is lengthy and could be simplified using a revised and well-managed water allocation plan, thereby reducing the uncertainty around water allocation and water licenses in the Wheatbelt.

The West Australian government has invested \$300 million of the Royalties for Regions funding into the 'Seizing the Opportunity' Program which includes improvements to irrigation and water resources through the \$40 million Water for Food program.

As part of the Water for Food program, the Department of Water has invested \$4.7 million into a groundwater investigation to assess the volume of available water in the Dinner Hill area West of Moora and North of Dandaragan, and the Irwin area, east of Dongara, and how these areas can be utilised for horticulture and general agricultural purposes<sup>13</sup>; this investigation is due for completion in 2018.<sup>14</sup>.

The Water for Food Program will help to reduce uncertainty and risk for private investors by investigating water quality, depth and volume and providing this information to help investors make more informed decisions. It will also provide an estimated 10GL of water for irrigated agriculture in the Dinner Hill area.

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<sup>13</sup> Department of Water, 2014, Water for Growth: An overview of current and future water management plans in Western Australia

<sup>14</sup> Department of Water, 2016, Water for Food: Midlands groundwater and land assessment

### Pests Control

Ongoing collaboration is required between sub-regions to manage pests, pest control collaboration and accreditation.

### **REFERENCES**

ABS 2011, Value of Agricultural Commodities 2011-12, Wheatbelt Region, Western Australia

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