

## WORKFORCE PROFILE – WINE INDUSTRY

### WINE INDUSTRY

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The Australian Bureau of Statistics classifies businesses according to their main economic activity. The Australian and New Zealand Standard Industrial Classification (ANZSIC) defines a hierarchy, with the most precise description of an industry at the Industry Class level. Most of the data that follows is based on the detailed ANZSIC Class data.

The wine industry for the purposes of this summary includes the following ANZSIC Classes:

- § 0114 – Grape growing
- § 2183 – Wine manufacturing
- § 2184 – Spirit manufacturing

#### Industry Composition

The wine industry (as defined by the 3 ANZSICs listed above) employed 10,759 people in South Australia in 2006, equivalent to 1.6 per cent of the state's total employment. Across the 3 separate industry categories employment was as follows:

§ 0114 – Grape growing	4,245 people employed
§ 2183 – Wine manufacturing	6,511 “ “
§ 2184 – Spirit manufacturing	3 “ “

Wine and spirit manufacturing accounts for 60.5 per cent of total employment in the wine industry, while grape growing employs approximately 39.5 per cent of the total employed.

According to the *Australian and New Zealand Wine Industry Directory 2007*, there were 563 wine producers in South Australia in that year, an increase from 502 in 2006. Of those wine producers, 18 South Australian producers crush more than 10,000 tonnes of grapes per year, representing 51 per cent of large producers in Australia. Conversely, 80 per cent of wine producers in South Australia crush less than 500 tonnes per year. South Australia also has 313 cellar door outlets – 55.6% of the wine producers listed, the lowest percentage in Australia.

#### Area and Production

The Australian Bureau of Statistics produces an annual compendium of activity in grape growing and wine production. From that publication, *Australian Wine and Grape Industry* (ABS Catalogue Number 1329.0), South Australia is recorded as having 73,088 hectares of vines in 2006, 43.3 per cent of the total plantings across Australia. South Australia's production of 881,346 tonnes of wine grapes in 2006 represented 49.5 per cent of the total wine grape crush in Australia.

South Australia produces approximately half of Australia's total wine output each year. In 2006, South Australia produced 724 million litres of wine, 50.6 per cent of total wine production in Australia.

#### Exports

Approximately 60 per cent of all wine produced goes to export. In 2005/06, Australian exports of wine were worth 2.8 billion dollars. In 2005-06, South Australia produced almost 60 per cent of all wine exported from Australia. The value of wine exports, at 1,539 million dollars, represented approximately 16 per cent of total exports from South Australia in 2005-06.

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While the wine industry accounts for a substantial export value each year, total direct employment in the industry represents 1.6 per cent of the State's workforce (ABS Population Census 2006).

### Age Groups

As can be seen in the following table, the wine industry has an age profile almost identical (in the age groups 25 to 54) to average industry employment in the state, with slightly lower proportion of younger people and with slightly higher proportions of older people (55 years or older). This slight weighting towards older people is common in agricultural industries generally.

#### Age Groups in Wine Industry, 2006

Age group	Number of people employed	Share of total wine industry employment	Share of all other industry employment
15-24 years	1,029	9.6%	16.7%
25-34 years	2,265	21.1%	19.7%
35-44 years	2,613	24.3%	23.9%
45-54 years	2,572	23.9%	24.0%
55 and over	2,275	21.2%	15.7%

Source: ABS Population Census 2006

### Nature of employment

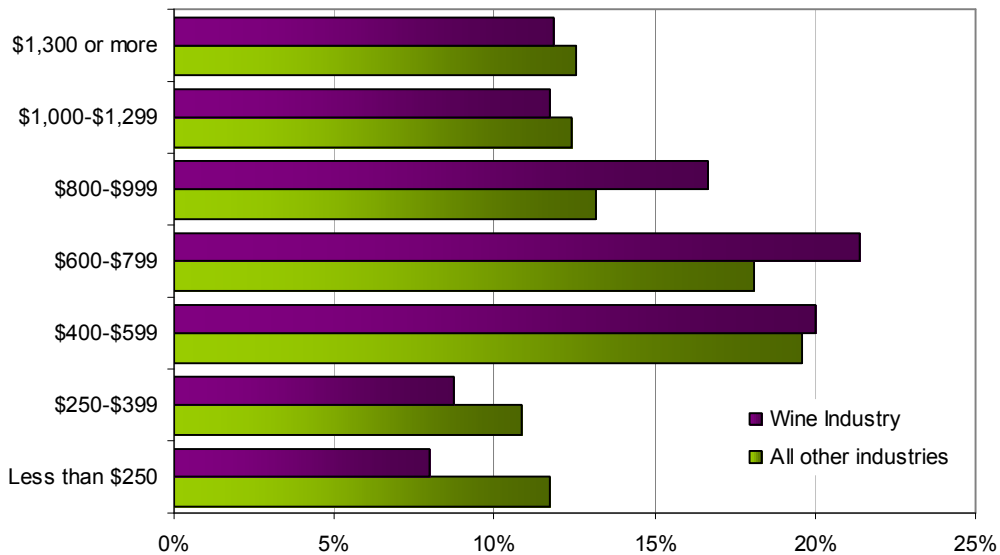
From the ABS Labour Force Survey of November 2007, 69.1 per cent of people working in horticulture and fruit growing were working as employees, and 15.8 per cent were self-employed. These proportions have fluctuated highly over the last few years, with self-employment reaching up to 50 per cent of all employment in the industry in the mid 1990s. In contrast, involvement in wine and spirit manufacturing is almost universally in paid employment; at various times up to 11.1 per cent of people involved reported being self-employed, with self-employment averaging around 2.6 per cent of all employment in this industry in recent years. Note that this information refers to the broader industry groups rather than specifically to grape growing and wine and spirit manufacturing.

From the same source, part-time employment is seen to a much greater degree in the horticulture and fruit growing industry (averaging at 23.1 per cent of total employment since late 2001) than in Beverage and Malt Manufacturing (an average of 10.7 per cent). The Beverage and Malt Manufacturing industries experience more fluctuations in levels of part-time employment, from highs around 20 per cent to lows around 2 per cent, while part-time employment in horticulture and fruit growing ranges from 10 to 38 per cent of the total workforce.

### Income

The distribution of incomes across the wine industry is similar to that of other industries, as will be seen in the following chart. The wine industry has lower proportions of employed people in both the high income range and in the lowest income range. Incomes are generally higher in the middle incomes, from \$400 to \$999 per week. Generally, incomes are higher in the Wine Manufacturing group and lower in the Grape Growing group; for example, more than 50 per cent of people employed in Grape Growing earned less than \$600 per week, compared to just over one quarter of those employed in Wine Manufacturing .

### Weekly Incomes, 2006



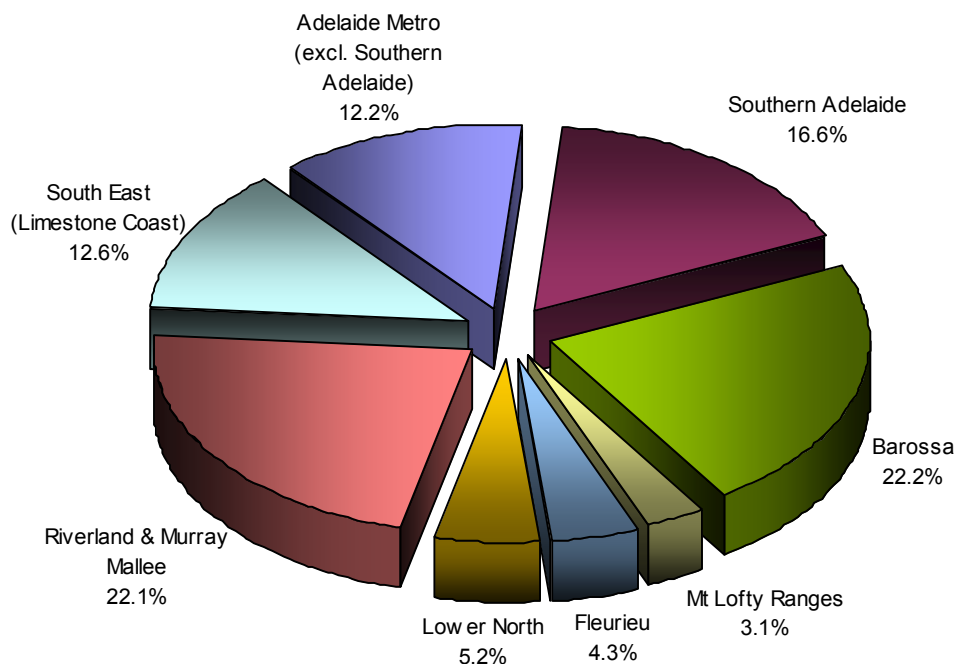
Source: ABS Population Census 2006

### Regional Distribution

South Australia's wine industry is concentrated in well-known regions. In terms of employment, the largest employing regions are the Barossa, the Riverland/Murray Mallee region and the Southern Adelaide.

The regions depicted in the following graph are Statistical Subdivisions, and reflect the residence of the person employed rather than their work location. It is important to note that this information does not take into account possible travelling across regions to work, though this is more prevalent in the Adelaide metropolitan area than in country regions.

### Employment in Regions, 2006



Source: ABS Population Census 2006

The approximate matching of where GI Zones fit into Statistical Subdivisions follows:

Statistical Subdivision	Wine GI Zone
Adelaide Metro (excl. Southern Adelaide)	Adelaide Plains
Southern Adelaide	Adelaide Hills (part), McLaren Vale (part)
Barossa	Barossa
Mt Lofty Ranges	Adelaide Hills
Fleurieu	Fleurieu, McLaren Vale (part)
Lower North	Clare Valley
Riverland & Murray Mallee	Riverland
South East (Limestone Coast)	Limestone Coast

The potential workforce for the wine industry is affected by many factors, including distribution of populations, competing industries, and the like. The following table measures the size of the total workforce and unemployment in regions across South Australia. As mentioned previously, the residential location of the labour force is not always an indicator of the location of their work; regions close to the Adelaide metropolitan area in particular are likely to experience people travelling across regions to work.

#### Regional Labour Force Statistics, September 2007

	Labour Force	Unemployment rate
Adelaide Metro (excl. Southern Adelaide)	409,947	5.6%
Southern Adelaide	179,401	4.7%
Barossa	19,787	3.0%
Mt Lofty Ranges	21,178	2.5%
Fleurieu	14,304	4.8%
Lower North	10,751	2.6%
Riverland & Murray Mallee	34,429	4.9%
South East (Limestone Coast)	33,895	3.8%

Source: DEWR Small Area Labour Markets, September Quarter 2007

#### Education and Qualifications

Data from the 2006 Population Census shows that people employed in the wine industry generally have a slightly lower level of qualifications than other industries.

Almost 62.9 per cent of people employed in Grape Growing have no formal post-school qualifications, and 48.4 per cent of people employed in Wine Manufacturing. The average across all other industries was 45.8 per cent.

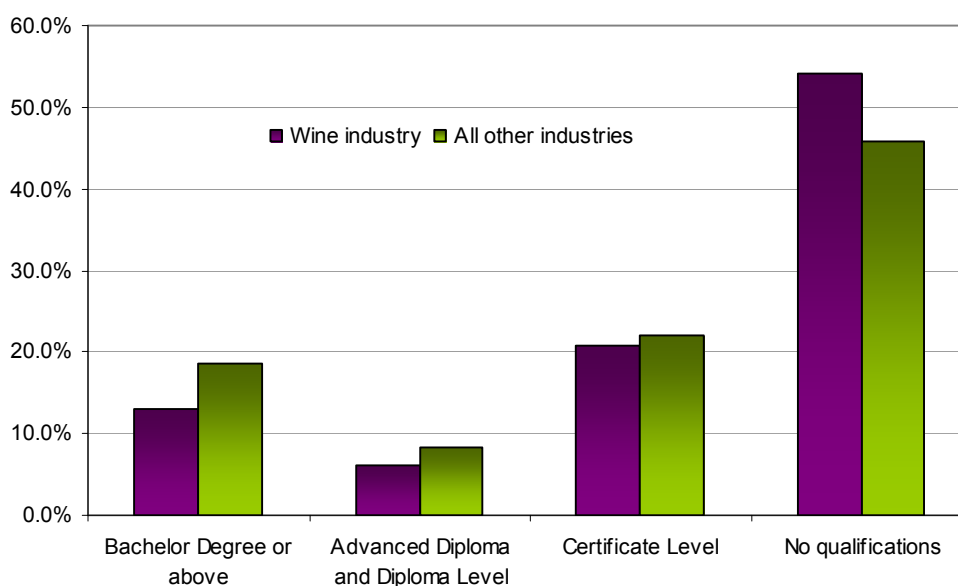
#### Level of Qualifications in Wine Industry, 2006

Highest Qualification	Grape Growing	Wine Manufacturing	Wine Industry
Bachelor degree or above	352	1,035	1,387
Advanced Diploma and Diploma Level	219	443	662
Certificate Level	734	1,495	2,229
Level of education not stated and inadequately described	269	386	655
No qualifications	2,670	3,152	5,823
<b>Total</b>	<b>4,244</b>	<b>6,511</b>	<b>10,756</b>

Source: ABS Population Census 2006

The most common qualification level for the wine industry was the Certificate level, with 20.7 per cent of people employed holding qualifications at that level (22.1 per cent for all other industries). Those people with tertiary qualifications at the Bachelor Degree level or above comprised 12.9 per cent of wine industry employees (18.6 per cent in all other industries).

**Level of Qualifications, 2006**



Source: ABS Population Census 2006

### Education, training and apprenticeships

As discussed in the section on occupations, there are a wide variety of tasks and roles in the wine industry, many of which will involve formal training and qualifications of some sort, including traineeships and apprenticeships. The following table shows numbers in traineeships and apprenticeships associated with the wine industry.

#### Commencements of Apprenticeships and Traineeships, Wine Industry

	2004	2005	2006
Grape Growing	13	6	13
Wine and Spirit Manufacturing	118	236	181

Source: National Centre for Vocational Education Research (NVQER)

As can be seen in the following table, most apprentices and trainees in the wine industry are training at lower end occupations; with more than 40 per cent training for labourer or related positions. There are also significant numbers of people training in the Associate Professional and Intermediate Production and Transport Worker fields.

VET students may also be undertaking a range of studies which are not so easily identifiable, with the intention of working in the wine industry.

## **Apprentices and Trainees – Associated Occupation groups**

	<b>2004</b>	<b>2005</b>	<b>2006</b>
Managers & Administrators	0	0	3
Professionals	1	0	0
Associate Professionals	14	63	34
Tradespersons & Related Workers	4	10	10
Advanced Clerical & Service Workers	0	0	0
Intermediate Clerical, Sales & Service Workers	7	10	6
Intermediate Production & Transport Workers	14	22	61
Elementary Clerical, Sales & Service Workers	0	0	0
Labourers & Related Workers	91	137	79
<b>Total</b>	<b>131</b>	<b>242</b>	<b>193</b>

Source: National Centre for Vocational Education Research (NVCEr)

There are a range of courses available through South Australian universities directly relevant to the wine industry. The major courses are listed in the following table. As can be seen, the majority of students are undertaking studies in either Oenology or Wine Marketing. Students may also study by distance education at other universities, which are not included in this table.

## **Higher Education South Australia - Number of students and completions, 2005**

	<b>Ongoing Students</b>	<b>Students completing study</b>
Bachelor of Agricultural Science (Oenology)	92	49
Bachelor of Agricultural Science (Viticultural Science)	6	6
Wine Marketing (Bachelor and Diploma level)	335	40
Wine Business (Master, Graduate Diploma and Graduate Certificate)	67	16
Oenology – other course levels	62	4
Viticulture – other course levels	12	7

Source: South Australian Universities

It should be noted that other studies may also contribute to careers in the wine industry, particularly given the wide range of occupations as previously noted.

## **School based viticulture and wine activities**

Students at South Australian secondary schools have various opportunities to engage in various levels of wine industry activity. While some schools base their courses outside formal vocational education and training (VET) programs, production horticulture is often combined with viticulture activities - planting, pruning, crop and water management and disease control combine with crushing, fermenting, cellaring and bottling wine. Wine making activities can also be conducted as part of formal chemistry classes, while art classes provide an opportunity to design wine labels.

- in 2006 there were 46 VET students enrolled in food processing (wine) and 264 VET students enrolled more broadly in Rural Operations/ horticulture (it is not possible to determine how many of these students are enrolled in viticultural activities)
- Australian School based apprenticeships (ASbA) - 3 students are currently in training in Food Processing (wine) while 10 students are enrolled in Rural Operations as at July 2007
- extensive activities occur in the major winegrowing regions of the state – Coonawarra, Clare, Barossa and McLaren Vale areas
- local area partnerships between various schools contribute to the establishment of regional “centres” such as those operating between Willunga High School and Tatchilla Lutheran College

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- Nuriootpa High School produces four wines annually and is the main wine production school in the district. Faith Lutheran College in the Barossa opened a purpose built winery in 2002 expanding their annual crush from half a tonne of fruit in 1995 to 15 tonne in 2004
- several suburban schools offer vineyard management and winemaking training which includes picking grapes, taking cuttings, hand pruning vines, canopy maintenance and the identification of pests and diseases

## Trends in employment

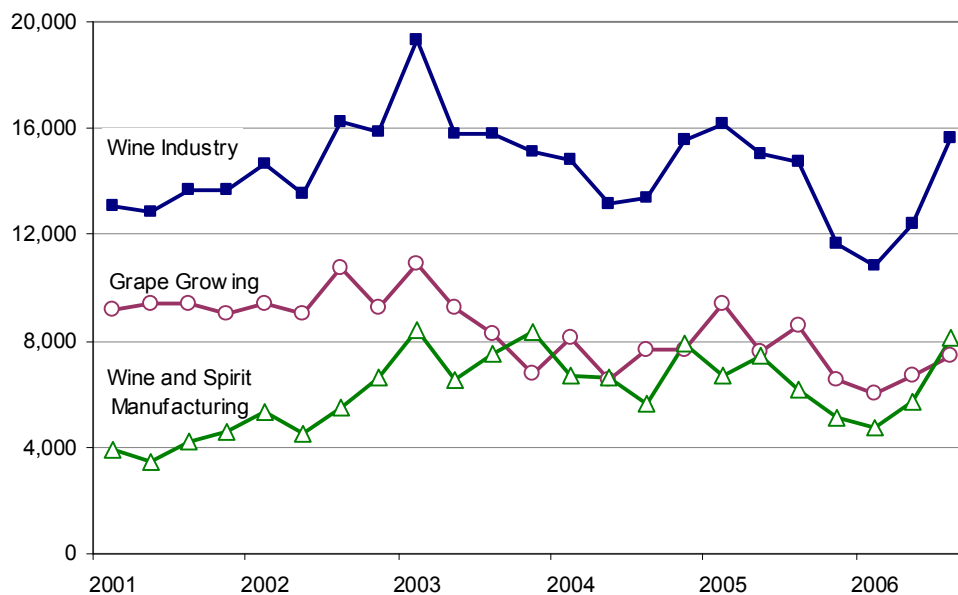
Updated information on employment is generally not available at the level of detail to specifically identify the wine industry. However, it is possible to make some estimate of employment by looking at broader levels of industry, and the share of employment that the wine industry has of those broader industry groups.

Most employment data available is from the 2006 Population Census. The ABS monthly Labour Force Survey (LFS) publishes employment by industry on a quarterly basis, but at a higher level of aggregation (3 digit ANZSIC), so that data from that source is available for the broader industry descriptions of Horticulture and Fruit Growing (ANZSIC Group 011) and Beverage and Malt Manufacturing (ANZSIC Group 218).

ANZSIC class 0114 (Grape Growing) accounted for 48.6 per cent of employment in Horticulture and Fruit Growing in 2006, and Wine and Spirit Manufacturing comprised 89.0 per cent of all employment in Beverage and Malt Manufacturing at the same time.

The following graph represents estimated employment growth within the wine industry from August 2001. The data is based on the share of employment calculated above, and assumes that share of employment in broader industries has continued at the same rate. As can be seen, employment has fluctuated considerably over the last several years, reaching a high point in late 2003 before declining through to late 2006. The latest data from November 2007 shows a resurgence of employment generally in the industry. The general trend in the industry shows declining employment in grape growing and growing employment in wine and spirit manufacturing, though employment in both industries has fluctuated considerably over the last few years.

**Estimated Wine Industry Employment, August 2001 to November 2007**



Source: ABS Labour Force Survey

## Occupations

Because of the disparate nature of activities within the wine industry, there is a similar wide spread of occupations involved. Similar to the industry classification mentioned earlier, The ABS has a classification of occupations, based on common groupings of tasks undertaken. Based on this classification, the top 10 occupations in the wine industry are shown in the following table.

### Major Occupations in Wine Industry, 2006

Occupation	Number of people employed	Share of total wine industry employment
9921 Farm Hands	2,310	21.5
1313 Crop Farmers	2,289	21.3
9214 Other Food Factory Hands	1,007	9.4
2549 Other Professionals	528	4.9
9222 Packagers and Container Fillers	407	3.8
7112 Forklift Drivers	226	2.1
3112 Science Technical Officers	186	1.7
7119 Other Mobile Plant Operators	185	1.7
4611 Farm Overseers	175	1.6
8211 Sales Assistants	155	1.4

Source: ABS Population Census 2006

Just over one-fifth (21.5 per cent) of all people employed in the wine industry are Farm Hands, and a further 21.3 per cent are Crop Farmers.

In attempting to more simply understand the myriad of occupations in the wine industry, the following table depicts employment in categories that have been generally accepted as descriptors of major activity. The table aggregates occupations according to their best fit into a category of activity, or job family. It is acknowledged that many occupations will span more than one category, and that some employees will have a range of duties that may make it difficult to accurately classify their role in the sense of a definable occupation.

### Major Activities in Wine Industry, 2006

Activities	Number of people employed	Share of total wine industry employment
Vineyard operations	4,951	46.0%
Cellar Operations	565	5.3%
Cellar Door Sales	320	3.0%
Laboratory Operations	203	1.9%
Bottling and Packaging	2,540	23.6%
Warehouse and Distribution	195	1.8%
Marketing and Sales	287	2.7%
Management and Administration	1,576	14.7%

Source: ABS Population Census 2006