Australian Potato Industry Overview

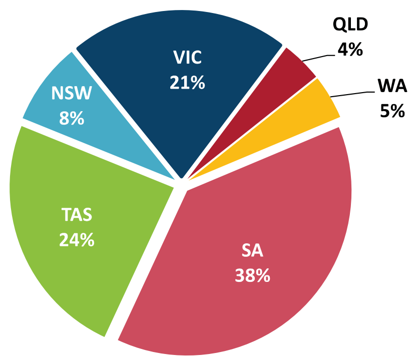
Doris Blaesing RMCG, May 2019

The Australian potato crop, grown on about 28,000 hectares of land, was estimated to be worth $746 m (gross value) for 2017-18 with an overall production of 1.39 million tonnes. (Australian Bureau of Statistics [ABS], 7503.0 - Value of Agricultural Commodities Produced, Australia, 2017-18).

Australian potato production is relatively small in the global context, producing less than 0.3% of the world crop (based on FAO statistics). Still, within an Australian context, potatoes are a major aspect of horticultural production. Potatoes represent the single largest vegetable crop within Australia with over four times the production volume of the next largest crop, carrots. Potatoes also represent approximately 20% of all horticultural production volume, including fruits vegetables and nuts, accounting for more than 40% of total vegetable output Production levels have been overall static for several years.

The wholesale value of the domestic fresh supply (ware potatoes) was $519 m for 441,439 tonnes (32% of total production). 36,529 tonnes of ware potatoes (3% of total production) were exported, valued at $28 m. 911.000 tonnes (65% of total production) were grown for processing. The ABS figures include potatoes grown for seed under 'fresh supply. Fresh potato tubers are not imported into Australia.

The ABS estimates that there were about 870 potato producers in 2016-17. Three states, South Australia, Tasmania and Victoria combined account for 83% of total production (Figure 1). South Australia grows the majority of ware potatoes, Tasmania is the major producer of processing potatoes. Fresh and processed potatoes are mainly delivered to domestic but also international markets. Seed is exported from Victoria and Western Australia.



Source: AUSVEG

Figure 1: Potato production percentage by state (all sectors combined)

Industry sectors

The potato industry covers three sectors: seed potato production, ware potato production destined for the fresh market (making up 35% of total production) and processing potato production (65% of total production). Each industry sector has its own structure, quality parameters and relationships. Crop management and monitoring reflect these differences.

Mini tuber production (by three main companies located in Victoria, Tasmania and South

Australia) is an important first step in potato production and production of healthy planting stock (**seed potatoes**).

Mini tuber and certified seed potatoes are grown under closely monitored conditions. Monitoring covers endemic pests and diseases. Weeds are controlled well as these can harbour pests and diseases. All mini tubers and about 40% of Australian potato seed are grown under QA/seed certification schemes. Crops grown under a scheme are monitored by independent (from the grower) certification officers. Seed crops are usually grown in distinct areas away from commercial production to better protect seed potato crops from pests and diseases. Somewhat isolated areas with climates that might aid in pest suppression are preferred. However, some seed crops can also be found in commercial production areas. Some fresh market growers produce their own seed (farm kept seed). These seed crops are usually started with bought in seed and run for two to three years before a 'fresh' lot of seed potatoes are brought in. Some growers use or even sell small tubers from commercial crops as seed. Small tubers from commercial crops sold as seed may cross state boarders.

Processing crops for French fries and crisping potatoes are each grown from specific varieties and in different production regions. Variety selection includes pest and disease resistance or tolerance. However, aspects important for e.g. productivity, storage, dry matter, shape and colour may be considered the more important selection criteria. Most processing potatoes are grown under contract for companies that undertake or oversee variety and site selection, seed production, production programming, crop agronomy, postharvest activities and marketing of the final product. They conduct in-house and externally funded R&D. Processors employ field officers to organise production and harvest with contract growers, and check on crops' progress, management and health.

Most varieties grown for the **fresh market** (ware potatoes), and an increasing proportion of processing varieties, are produced from varieties that are protected by Plant Breeders Rights (PBR). Most of these have been bred overseas and are brought into the country as in vitro plants under quarantine regulations to ensure freedom from diseases. Supermarkets have an impact on the fresh market varieties grown for them. Due to this market influence, varieties susceptible to pests and diseases may be grown for the fresh market. Some of the large scale ware potato ware producers oversee the production of seed to ensure they receive tubers that meet their quality standards.

State and regional industry aspects

The make-up of the potato producing industry differs by state and region in terms of sector mix (i.e. seed, fresh or processing) and in business scale.

- In South Australia (SA, 38% of total), production has increased since the 2000's and now a relatively small number of large-scale producers dominate ware potato production in the state. Still, about 25% of SA production is for processing. Production is regionalised, each with a different market focus e.g. Kangaroo Island for seed production, the Adelaide Plains and the Mallee for fresh potatoes and the South East (Mt Gambier region) for processing and seed potatoes.
- In Tasmania (Tas, 24% of total) around 90% of production is for processing, with a large proportion produced in the north- west and north-east of the state. Fresh and seed production is important for supplying the Tasmanian ware seed markets as fresh tubers are not permitted entry into Tasmania to control pest and disease risks. Seed potatoes and some fresh market crops are grown in the Northern Midlands area.

- In Victoria (Vic, 21% of total), processing potato production is important in the Ballarat region and Victorian seed production e.g. in the Thorpdale, Ottways and Portland areas) accounts for a large proportion of the Australian seed potato crop, along with fresh market potatoes. East and West Gippsland produce fresh market potatoes.
- New South Wales (NSW, 8% of total) has a focus on fresh market potatoes in the Riverina and around Hillston, and a small seed potato industry in the Crookwell and Guyra regions.
- In Western Australia (WA, 5% of total), the small industry has a focus on fresh and seed production to supply the WA fresh market as well as export markets (especially with seed). Seed is produced mainly in the Albany region while ware potatoes are grown in South or Perth in the Manjumup/Pemberton area, around Bunbury, Busselton and Myalup and North of Perth around Gingin and Dandaragan.
- The focus in Queensland (Qld, 4% of total), is on fresh market potatoes for the local and domestic markets. Crops are mainly grown in the Lockyer Valley, around Bundaberg, Gatton and on the Atherton Tablelands.

Figure 2 illustrates the number of businesses growing potatoes by state, Figure 3 shows production data.

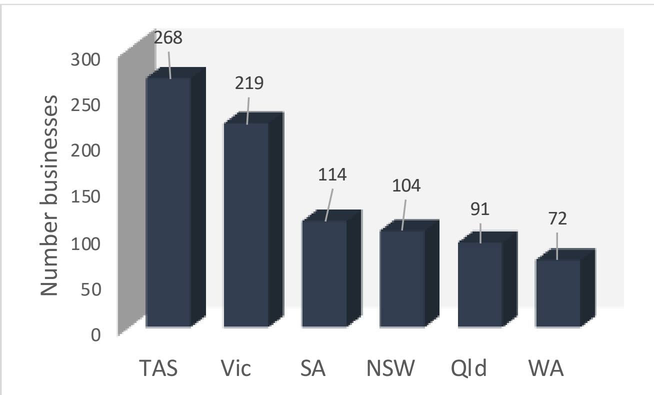


Figure 2: ***Number of businesses growing potatoes in each state***

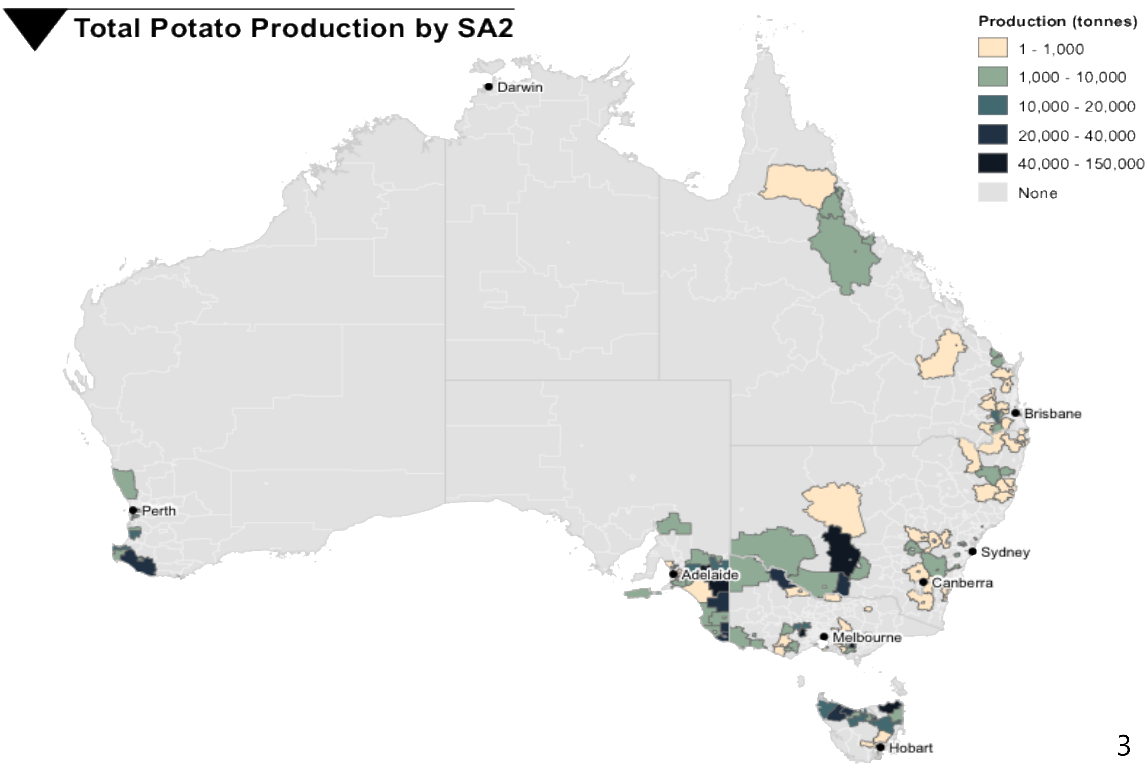


Figure 3: Potato production (tonnes) across Australia

Between regions, there are substantial differences in climate, soils, growing seasons and practices. Generally, commercial potato crops are irrigated via a range of overhead systems (apart from seed in NSW). Potatoes are mostly grown in rotation with other crops and pastures. In SA however, fresh market potato production is often shifted to new land rather than using rotation.

Many business-to-business relationships and several industry associations or interest groups exist in the complex potato industry. Depending on seasonality (Table 2) and markets, competition exists between production regions for ware potatoes and may occur for seed.

Table 2 – Seasonality of potato production and availability by state

State	17/18 Tonnes	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
New South Wales	111,879												
Victoria	293,683												
Queensland	55,940												
Western Australia	60,402												
South Australia	531,427												
Tasmania	335,638												
Availability legend			High			Medium			Low			None	

Source: Australian Horticulture Statistics Handbook 2019 (https://www.horticulture.com.au/growers/help-your-business-grow/research-reports-publications-fact-sheets-and-more/australian-horticulture-statistics-handbook/)

Soilborne diseases occurring in potato crops in Australia

- Common Scab - *Streptomyces scabies*
- Powdery Scab - *Spongospora subterranea*
- Early blight - *Alternaria solani*
- Late Blight - *Phytophthora infestans* (A1 mating type)
- Silver Scurf - *Helminthosporium solani*
- Black dot - *Colletotrichum coccodes*
- Stem Canker and Black Scurf - *Rhizoctonia* solani
- Pink rot - *Phytophthora erythroseptica*
- Bacterial wilt - *Ralstonia solanacearum*
- Blackleg/Soft rot – *Erwinia spp*
- Blackleg/Soft rot *Dickeya solani*
- White Mould - *Sclerotinia sclerotiorum*
- Verticillium Wilt (Early Dying) - *Verticillium albo-atrum, V. dahliae*
- Stem Rot - *Sclerotium rolfsii*
- Fusarium Dry Rot and Wilt - *Fusarium spp.*
- Pythium Leak - *Pythium spp*