AUSTRALIAN PROCESSING TOMATO RESEARCH COUNCIL Inc.

ANNUAL INDUSTRY SURVEY

2024

Contents

1 Executive Summary

The annual industry survey provides a year-on-year comparison, detailing industry performance in the current year compared with the previous one.

The data also tells the 'story' of Australian production and international trade over a longer period of time, supporting analysis of where the industry is headed, for example in terms of grower numbers, production, and location.

The 2023/24 season was relatively poor in terms of tonnes and quality, due to severe storms and localised flooding between the 24th of December and the 8th of January.

During the 2023/2024 season, twelve growers produced 211,350 tonnes of processing tomatoes, which is approximately double the volume grown in 2022/23, and the crop was again processed by three companies.

Some 2,741 hectares were planted in total, with sub-surface drip irrigation used for 2,634 ha, a combination of drip irrigation and pivot irrigation used for 50.5 ha and the remaining 56 ha grown using only pivot irrigation.

The use of transplants was slightly lower than in previous years at 85% of the total area under production, with direct-seeded tomatoes making up the remaining 15%.

In 2023/24, the Australian processing tomato industry achieved an average yield of 80.7 tonnes per hectare and 96% of the planted area was harvested.

Soluble solids averaged 5.4%, which is desirable. However, crop yields were down by approximately 20% across many properties so what we're observing is the typical inverse relationship between yield and solids.

On the international scene, imports and exports are reviewed and discussed in the context of the previous calendar year (2023), not the abovementioned processing season (2023/24).

An interesting anomaly occurred in imports during the 2023 calendar year, where the importation of processed tomato products into Australia decreased on a finished product tonnes basis, but increased when considered on an 'equivalent tonnes' basis. This suggests that on an equivalent tonnes basis, the importation of tomato products is still increasing year on year.

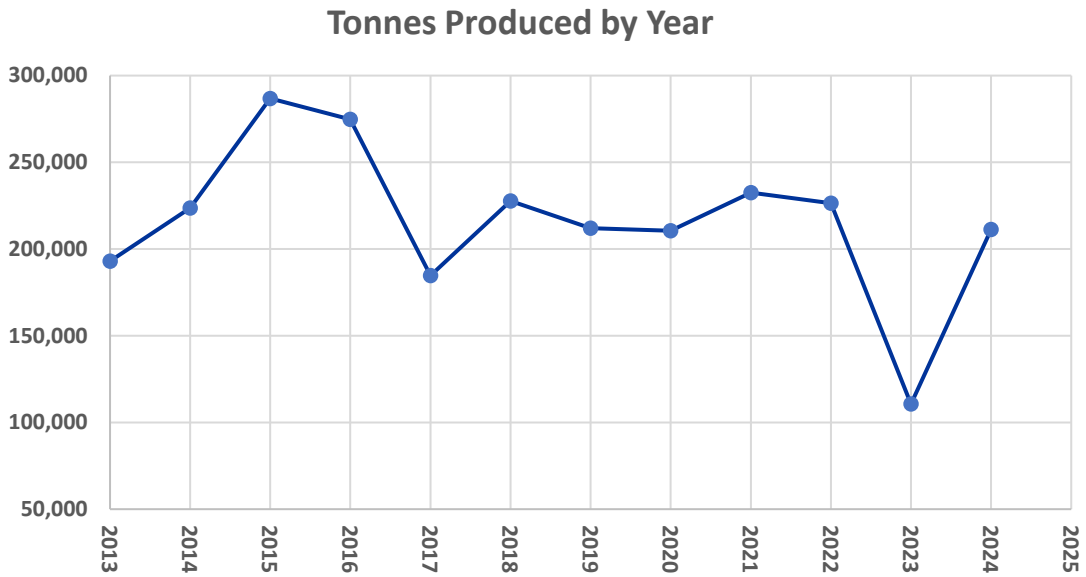
Exports of Australian processed tomatoes on the other hand dropped significantly, to levels not seen since 2011. This drop in exports was predicted in the last industry survey report, on the basis that when we produce only half the usual quantity of tomatoes, it follows that exports will drop. The export figure should ratchet back upwards again from 2024 onwards, assuming adequate yields are achieved under more stable seasonal conditions.

Total Australian domestic consumption increased in 2022, however it was supplied by imports rather than local product. An ideal situation would be to see increased consumption supplied by a higher proportion of domestic production.

Australian domestic per capita consumption decreased substantially in 2023, although the cyclical nature of consumption is not without precedent over the past 10 years and it could very well increase again over the next year or two.

2 Industry Size

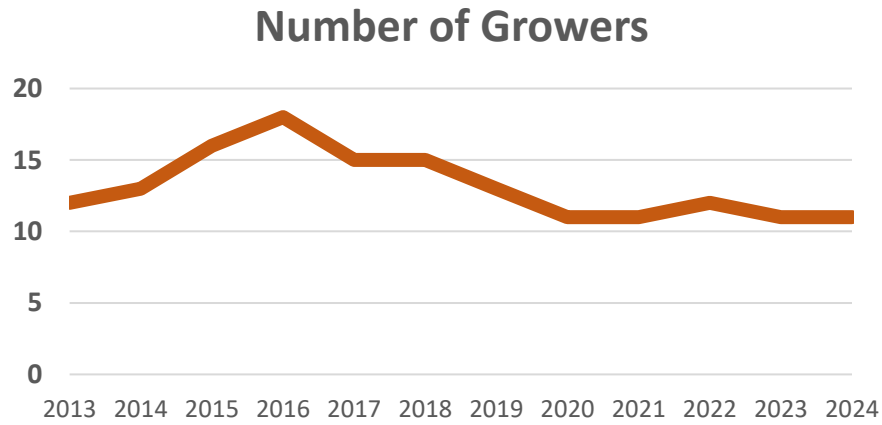
2.1 Volume



2.1.1 Paid tomato volumes delivered (tonnes) (APTRC)

Growers produced 211,350 tonnes of processing tomatoes during the 2023/24 season, with the bulk of demand coming from the two major processing operations in Australia. There were no organic tomatoes processed this season.

2.2 Producers



2.2.1 Number of growers (APTRC)

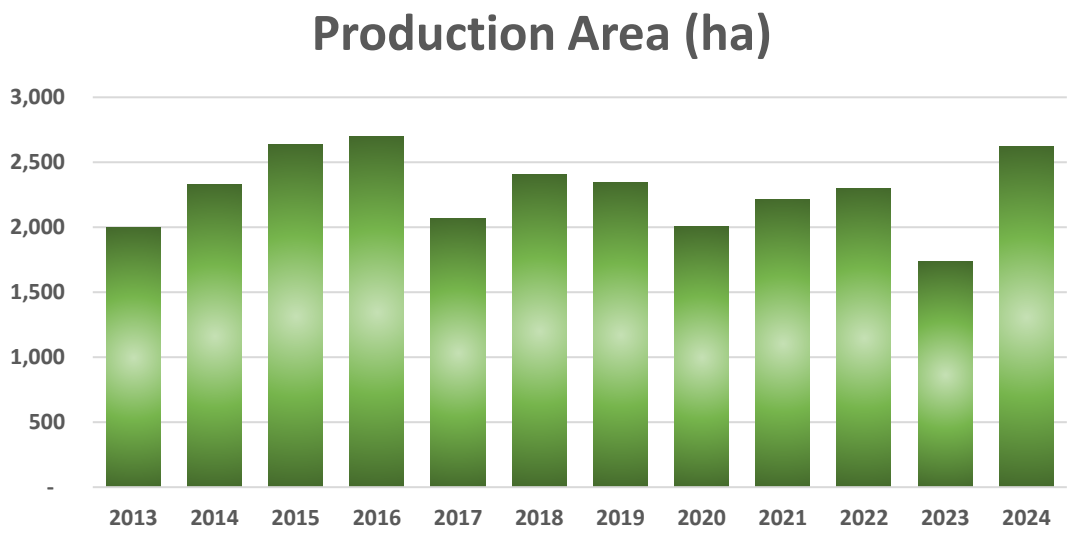
There were 12 specialist businesses producing for the 2023/24 processing tomato season, spread mainly across Northern Victoria, with a lesser number growing in Southern NSW.

2.3 Processors

As in the previous season, the entire crop was processed by three organisations, with Kagome taking 77.6%, SPC 19.2% and Billabong Produce 3.2%.

3 The Crop

3.1 Area and management



3.1.1 Planted production area (ha) (APTRC)

The area under production increased to 2,741 hectares, of which 96% was harvested. The larger area planted was ideally going to help re-bolster local and export supply options, but fell short of expectations due to poor weather conditions.

Season		Transplanted	Seeded
2010/11		79%	21%
2011/12		81%	19%
2011/13		72%	28%
2013/14		59%	41%
2014/15		68%	32%
2015/16		69%	31%
2016/17		86%	14%
2017/18		88%	12%
2018/19		91%	9%
2019/20		86%	14%
2020/21		90%	10%
2021/22		85%	15%
2022/23		94%	6%
2023/24		85%	15%

3.1.2 Proportions of transplants Vs seed by area grown (APTRC)

This season, the crop was mainly grown under sub-surface drip irrigation, however in an innovative and bold move, Kagome Farms grew 55 ha using only centre pivot irrigation (i.e., without drip irrigation). This method will be used more extensively in the coming seasons to help maximise existing infrastructure and reduce the need for costly drip irrigation systems. For the 2023/24 season, Kagome Farms extended their crop grown on sand to 163.9 ha.

There was an increase in the proportion of direct seeded crop grown this season. This was due to the Boort region (known for its direct seeding practices) being less affected by floods than the previous season. The Boort region is still the only area direct-seeded and represented 15% of the total industry by area in 2023/24.

Area and Production by State	VIC	NSW
Area Planted	70%	30%
Tomato Volume Processed	72%	28%

3.1.3 Production by State (APTRC)

In the 2023/24 season, the relative planted area (%) and production amount (%) by state aligned very closely. This suggests that the area planted and yield per hectare from those areas is relatively stable (on average at least) across not just states, but over different water, soil and climatic conditions.

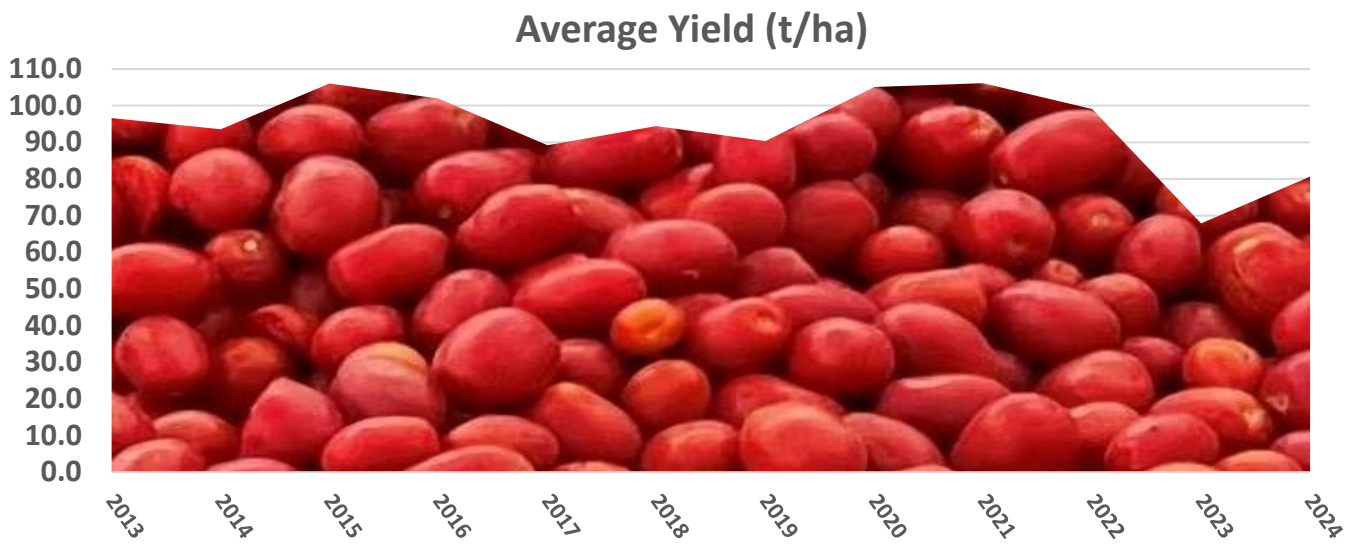
3.2 Yield

Season	Area (Ha) Planted	Area (Ha) Processed	Area % Harvested	Average Yield MT/ha	Major Seasonal Challenges
2012/13	1999	1998	100%	96.6	Wet, late harvest
2013/14	2386	2330	98%	93.6	Wet, late harvest
2014/15	2700	2635	98%	106.1	Early crop failure
2015/16	2782	2697	97%	101.9	Poor crop stand, delayed harvest, over-contract fruit
2016/17	2183	2071	95%	89.2	Delayed harvest due to rain
2017/18	2457	2407	98%	94.4	Abandoned due to factory power outage and resulting delay
2018/19	2347	2347	100%	90.3	Extreme bacterial speck, high temperatures
2019/20	2073	2003	97%	105.1	Hot and windy during growing; late harvest rains
2020/21	2215	2215	100%	106.13	Dry start, strong winds mid spring, some hail, mild summer
2021/22	2480	2300	93%	99.1	Delays from staff scarcity and crops abandoned due to wet finish
2022/23	1733	1643	95%	67.9	Excess early rainfall & flooding caused planting delays and losses
2023/24	2741	2620	96%	80.7	Storms caused widespread damageand poor growth due to flooding

3.2.1 Average yield, harvest conditions (MT/ha) (APTRC)

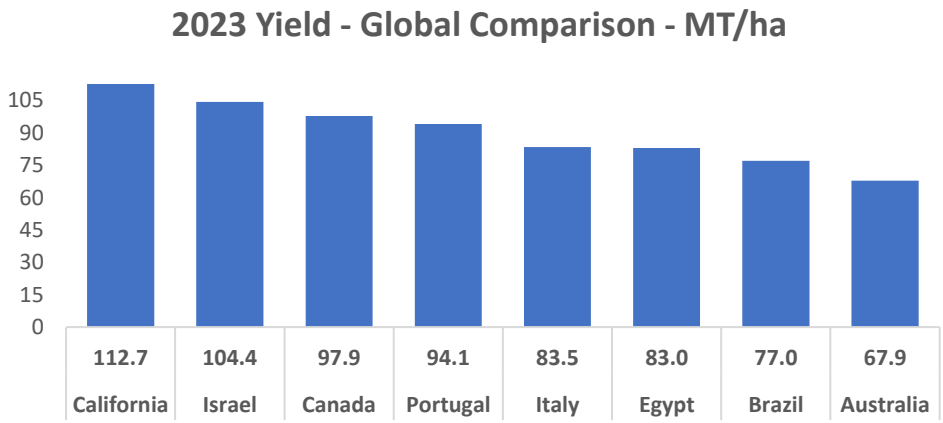
The storm events between 23/12/23 and 08/01/24 caused direct widespread damage from hail, wind and localised flooding, with consequent growth suppression due to waterlogging and prolonged plant stress conditions.

While the 2023/24 season saw an increase in average yield from the previous season, production was still well below the industry standard of approximately 100 t/ha.



3.2.2 Average yield (t/ha) (APTRC)

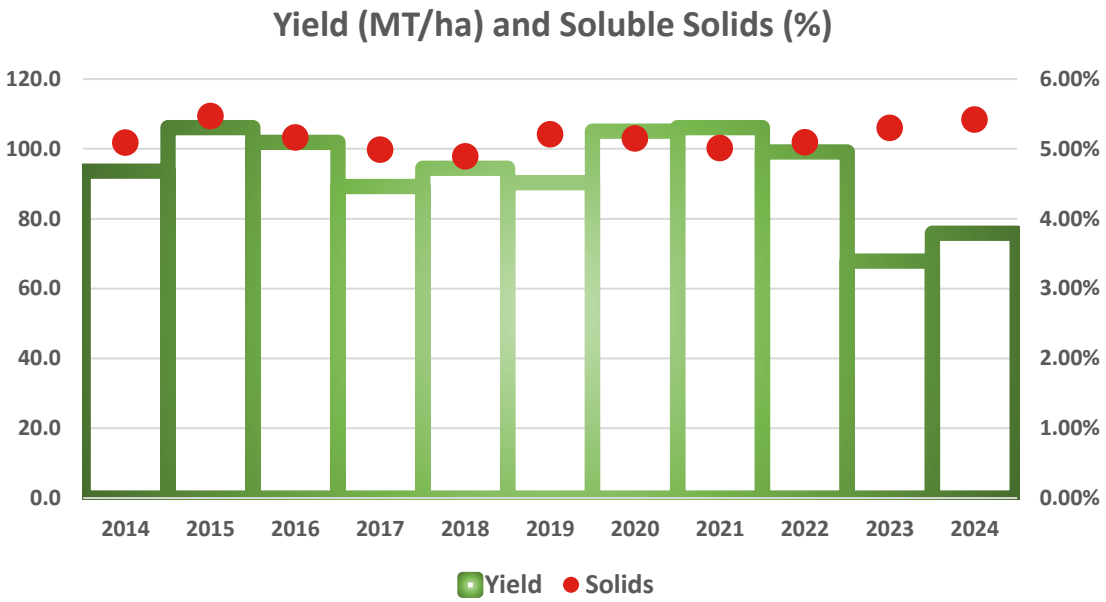
The industry recorded an average yield of 80.7 tonnes per ha for season 2023/24, which is relatively low by global standards but was a direct result of adverse weather conditions. The damage from these weather events ultimately led to the loss of 121 ha of planted crop.



3.2.3 2023 average yield (MT/ha), by country (Colvine)

Note: To get the most accurate global comparison, data for international production is a season behind and in this report, comparisons are drawn with the 2022/2023 season. This is due to the offset availability of data from the Northern Hemisphere.

3.3 Soluble Solids



3.3.1 Soluble solids (%) and yield (t/ha) (APTRC)

Average soluble solids for the season were 5.42%, which is above the minimum benchmark of 5.0% preferred by processors.

3.4 Cultivar

CULTIVARS	Percentage of Total Area Grown	
	2023/24	*2022/23*
H3402	38.3%	24.3%
H1015	22.7%	18.4%
H3406	8.9%	0.6%
UG19406/UG16112	6.9%	12.4%
UG16112	6.8%	2.5%
H1311	6.6%	5.8%
SVTM9023	2.6%	0%
SVTM9000	2.5%	4.7%
H1301	2.2%	7.8%
H1311mix	2.0%	0.4%
SVTM9024	0.48%	2.0%
SVTM9025	0.003%	0%
H3402mix	0.0%	0.9%
H1014	0.0%	14.4%

3.4.1 Cultivar by proportion of total area

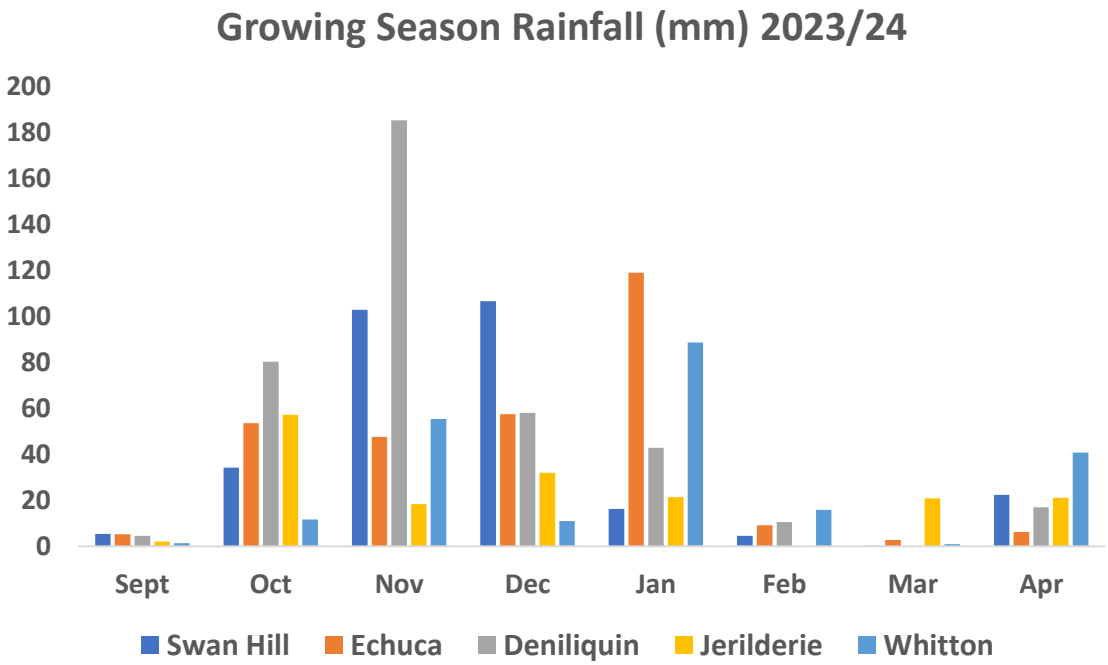
When comparing the 2022/23 and 2023/24 seasons, there were some significant shifts in the balance of cultivars grown by area. Many factors influence the mix of cultivars grown from season to season including changing customer requirements, upgrading of processing infrastructure, new market access or loss of previous markets, seasonal harvesting logistics and

agronomic suitability to growing region and soil type. (Note: 2022/23 figures will not equal 100% as there was no UG4014 or HM58811 grown last season, which amounted to 5.7% of total area).

There were 2 new Bayer/Seminis (Code STVM) cultivars commercially grown this past season, which is encouraging to see and a direct result of the well supported industry cultivar improvement trial program.

4 The Season

4.1 Rainfall

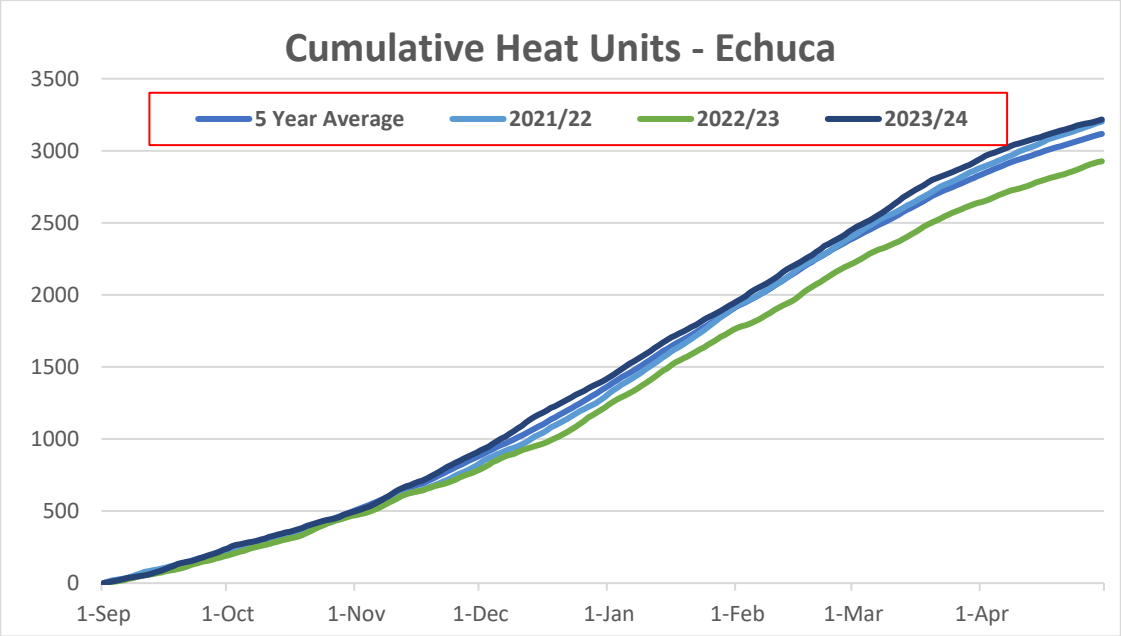


4.1.1 Rainfall across the major growing regions (mm) (BOM)

For most regions, rainfall was significant for the December and January period, but falls were not considered extreme. The rainfall chart suggests that it was not the volume of rain that affected the industry over summer, but the intensity of the rainfall events that hampered production.

The harvest period during February and March was relatively free from rain, which was of great importance to industry in getting the crop off and processed.

4.2 Heat Units



4.2.1 Heat units – Echuca (BOM)

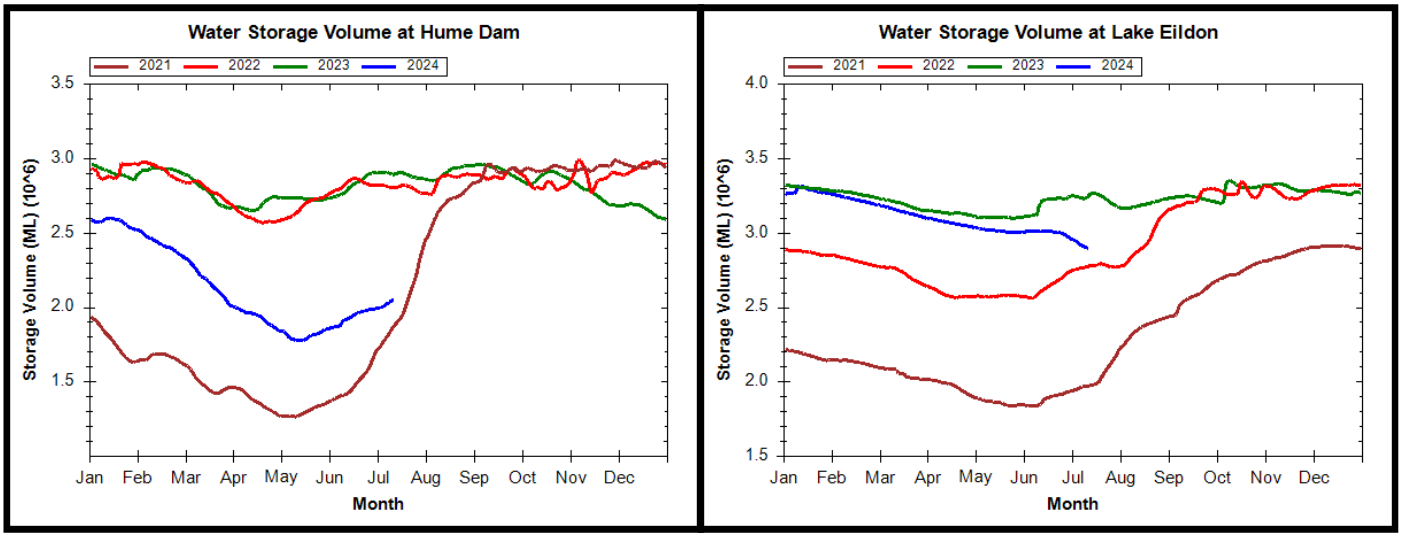
The heat units recorded during the major crop growth period demonstrate that the season was similar to the 5-year average, but warmer than the previous season.

Although this graph uses data from Echuca, it's a central point for industry and can be generally considered indicative of what was experienced by growers in surrounding regions.

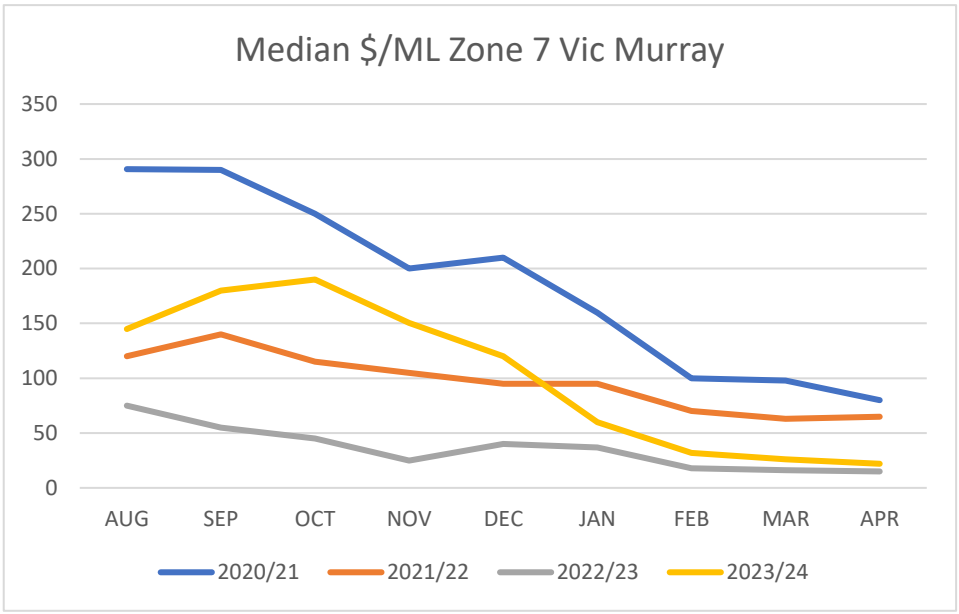
4.3 Water Storages

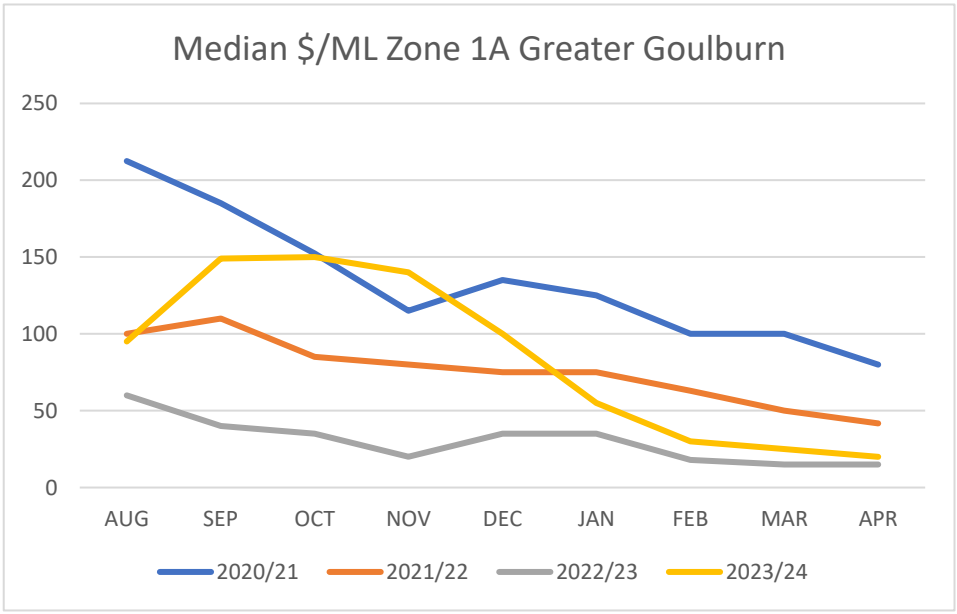
4.3.1 Storage Volume, Lake Eildon and Hume Dam (GMW)

The water storage level in Hume dropped off later in the season last year, whereas Eildon levels remained steady. Both storages remained at desirable levels.



4.4 Water Price





4.4.1 Zone 1A and Zone 7 median water price ($/ML) (Registry)

The price of water during 2023/24 remained low and the price of water could be seen as a direct reflection of higher allocations and inflows into major water storages for Victoria and NSW.

5 Trade

5.1 Imports

Product	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Dried/powder	35,940	26,875	34,506	37,934	37,660	34,880	28,017	29,143	34,263	26,638
Whole/pcs <1.14L	42,660	45,222	40,965	43,354	42,683	41,799	51,121	36,356	45,488	38,479
Whole/pcs >1.14L	28,402	28,088	22,997	24,002	24,275	22,369	21,129	21,316	24,029	18,908
Paste/puree<1.14L	83,976	153,210	102,733	107,923	109,578	110,328	159,447	137,971	125,751	147,343
Paste/puree>1.14L	109,242	102,866	130,171	140,532	144,906	133,524	43,118	140,502	187,046	203,539
Juice	116	75	83	38	75	50	30	17	47	27
Sauce/ketchup	38,628	39,276	38,462	45,705	45,946	47,050	48,375	45,788	51,585	58,092
Total Tomato	**338,964**	**395,612**	**369,917**	**399,488**	**405,123**	**389,999**	**451,236**	**411,093**	**468,210**	**493,026**

5.1.1 Imports of Tomato Products (equivalent raw tonnes) (ABARES)

The volume of imports rose again during 2023, due only to increases in 'Paste/Puree' and 'Sauce/ketchup' categories.

This is the largest quantity of imports into Australia since industry started collecting records in 2010.

The largest sources of these imports, sorted by category were as follows (where the major importer supplied less than 90% of the total, the next most significant supplier/s are also included).

- **Dried/powder** – Turkey 58.18%, China 14.15%, New Zealand 13.49%
- **Whole/pcs <1.14L** – Italy 96.65%
- **Whole/pcs >1.14L** – Italy 93.88%,
- **Paste/puree<1.14L** – Italy 75.82%, China 14.51%
- **Paste/puree>1.14L** – USA 41.88%, China 34.57%, Italy 16.12%
- **Juice** – USA 51.59%, Thailand 21.15%, Mexico 14.6%,
- **Sauce/ketchup** – Italy 38.09%, New Zealand 20.95%, Spain 11.81%

At 60% of total volume (last year 67%), Italy remains the dominant source of imported processed tomato products into Australia. The next largest suppliers were China and USA, supplying 13% and 10% respectively into Australia.

Product	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Dried/powder	6.72	7.44	6.56	6.77	6.83	6.62	7.26	6.10	6.42	7.23
Whole/pcs <1.14L	1.47	1.45	1.50	1.32	1.38	1.47	1.62	3.40	1.67	2.11
Whole/pcs >1.14L	1.25	1.23	1.13	1.07	1.15	1.17	1.17	2.31	1.31	1.78
Paste/puree<1.14L	1.71	1.69	1.65	1.53	1.50	1.63	1.83	1.73	1.86	2.30
Paste/puree>1.14L	1.32	1.58	1.40	1.30	1.36	1.44	1.53	1.35	1.56	3.73
Juice	1.54	1.91	1.09	2.86	2.12	2.17	3.61	3.73	3.02	3.47
Sauce/ketchup	2.05	2.13	2.13	2.11	2.11	2.22	2.56	2.42	2.36	2.72
Total Tomato	**1.51**	**1.54**	**1.52**	**1.44**	**1.47**	**1.56**	**1.70**	**2.33**	**1.70**	**2.67**

5.1.2 Average import prices ($/kg), in 2023 monetary values (ABARES)

5.2 Correlation between Imports and Price

- The overall price for imports during 2023 rose significantly and this rise was seen across all product categories.
- The correlation across the past 10 years for products suggests the following:
    - Juice exhibits a strong negative correlation, meaning as price goes down, imports go up.
    - Sauce/ketchup exhibits a moderate positive correlation, meaning as price goes down, imports go down.
- The correlations for imported product are quite varied and swing from moderately positive to moderately negative and deviate within different package sizes within category groups. Therefore, it suggests that overall, the variability in imported volumes does not appear to be strongly price driven for most categories (except for Juice).

5.3 Exports

Product	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Whole/pieces	2,552	746	461	133	62	139	623	273	417	513
Paste/puree	33,800	43,747	104,518	21,852	16,402	11,695	32,766	38,323	22,032	9,085
Sauce/ketchup	3,524	8,196	4,039	8,799	11,636	13,227	14,788	17,986	13,660	5,661
Juice	195	131	57	50	80	106	52	47	118	112
Total Tomato	**40,070**	**52,819**	**109,075**	**30,834**	**28,180**	**25,167**	**48,228**	**56,629**	**36,227**	**15,371**

5.3.1 Exports of tomato products (ABARES) (equivalent raw tonnes)

The overall volume of exports decreased significantly for the second year running, most noticeably in the paste/puree and sauce/ketchup categories. Juice remained constant and the whole/pieces category increased; however, they represent a small portion of total exports.

The largest export markets, sorted by category and then by country were as follows:

- **Whole/pieces** – Thailand 59%, Papua New Guinea 12%, USA 4%
- **Paste/puree** – Vietnam 40%, Japan 21%, Thailand 13%
- **Sauce/ketchup** – New Zealand 34%, China 25%, Japan 24%
- **Juice** – Singapore 22%, New Zealand 14%, UK 8%

At 22% of all products, New Zealand was the major export destination for Australian processed tomato produce, with Japan close behind at 21% and China at 15% of total exports.

Product	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Whole/pieces	1.53	4.79	5.96	7.76	5.52	3.03	1.95	3.41	3.41	3.05
Paste/puree	1.63	1.50	1.15	1.38	1.64	2.08	2.61	2.43	2.32	2.83
Sauce/ketchup	3.06	3.01	3.18	2.26	2.31	2.35	2.71	2.32	2.12	2.88
Juice	1.44	1.49	1.87	1.32	2.01	1.21	1.24	1.14	1.12	1.54
Total Tomato	**1.65**	**1.95**	**1.30**	**1.73**	**1.88**	**2.03**	**2.34**	**2.12**	**2.35**	**2.85**

5.3.2 Average export prices ($/kg) (ABARES), in 2023 monetary values

The real price of exports increased slightly in 2023, which is beneficial for the Australian processing industry.

The data suggests a moderate negative correlation between average export price and volume exported, meaning that as price goes up, volume exported goes down. This applies to all product categories, except for Juice, which consistently appears to have no correlation to export price whatsoever.

It's worth noting that there is a diminishing correlation between export volumes and the USD exchange rates across the last 10 years, meaning that exports from Australia are less dictated by exchange rates and that other market forces are having more influence on annual export opportunities.

5.4 Market Demand

Calendar Year	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	5 yr	10 yr
Dom. Demand	520,525	629,620	534,691	553,336	604,579	576,793	613,485	587,025	658,422	588,276	604,800	586,675
Imports	338,964	395,613	368,918	399,488	405,123	389,999	451,236	411,093	468,210	493,026	442,713	412,167
Net Australian	181,561	234,007	165,773	153,848	199,456	186,794	162,249	175,933	190,212	95,250	162,087	174,508
Imported %	65%	63%	69%	72%	67%	68%	74%	70%	71%	84%	73%	70%
Local %	35%	37%	31%	28%	33%	32%	26%	30%	29%	16%	27%	30%
Per capita (kgs)	**22**	**26**	**22**	**22**	**24**	**22**	**24**	**23**	**25**	**22**	**23**	**23**

5.4.1 Apparent domestic market demand (ABARES) (equivalent raw tonnes)

Table 5.4.1 represents the Australian market demand for processed tomato products and shows how this demand is being supplied, from local or imported products.

For individual years, combining data can produce non-matched results; ABARES data is based on a calendar year, rather than a seasonal year, and this survey is unable to account for year-end stocks. However, these factors should tend to be mitigated when viewed over time, such as through the 5-year or 10-year averages.

Considering this data, the following may be noted:

- **Imports:** Imports increased in the 2023 calendar year and are higher than the 10-year average.
- **Net Australian:** The net Australian figure equates to tomatoes processed, less exports and was the lowest observed result since beginning the survey in 2010. This low result means that a significantly low volume of locally grown and processed product was used for domestic consumption.
- **Domestic Demand:** The demand for processed tomato products in Australia was back slightly in 2023.
- **Imported %:** The imported percentage of processed tomato products was at the highest level since these figures were first collected in 2010. Ideally, we would like to see imports decrease, as more Australian produce meets local demand.
- **Local %:** The percentage of local product sold in the Australian market decreased significantly in 2023, largely due to the poor cropping season.
- **Per Capita kgs:** The average per capita consumption fell to 22 kilograms of equivalent raw tomatoes. This result sits just below the 5yr and 10yr averages.

6 Global Industry

6.1 Production

In 2023, recorded global production totalled **44,416** million tonnes, compared to **38,449** million tonnes for the previous year; a monumental increase of 15.5%. This is mainly due to the significant increase in China's production, on top of a large crop in the USA.

In 2023, Australia contributed only 0.2% of global production (compared to 0.6% of global production in 2022) and moved its ranking down to 25th for industry volume (compared to 17th for industry volume in 2022). This drop off in supply is explained by the significant losses incurred in the 2022/23 flood season. Expect Australia's ranking to increase again in 2024.

Country	Season	2022	2023	2024 Prelim	% Change 2023-24E	Ranking 2023	% Total 2023
USA	Jul-Dec	9,964	12,031	10,455	-13%	1	27.1%
China	Jul-Dec	6,200	8,000	10,450	31%	2	18.0%
Italy	Jul-Dec	5,476	5,400	5,250	-3%	3	12.2%
Turkey	Jul-Dec	2,350	2,700	2,700	0%	4	6.1%
Spain	Jul-Dec	2,125	2,600	3,060	18%	5	5.9%
Iran	Jul-Dec	1,800	2,000	1,400	-30%	6	4.5%
Brazil	Jul-Dec	1,632	1,650	1,671	1%	7	3.7%
Portugal	Jul-Dec	1,414	1,500	1,500	0%	8	3.4%
Algeria	Jul-Dec	1200	1350	1300	-4%	9	3.0%
Chile	Jan-Jun	971	1150	1300	13%	10	2.6%
Tunisia	Jul-Dec	649	795	980	23%	11	1.8%
Russia	Jul-Dec	638	660	650	-2%	12	1.5%
Egypt	Jul-Dec	456	600	624	4%	13	1.4%
Argentina	Jan-Jun	626	586	631	8%	14	1.3%
Canada	July-Dec	548	520	512	-2%	15	1.2%
Ukraine	Jul-Dec	120	500	540	8%	16	1.1%
Greece	Jul-Dec	340	390	510	31%	**17**	0.9%
Poland	Jul-Dec	175	250	400	60%	18	0.6%
Dominican Republic	Jul-Dec	227	227	227	0%	19	0.5%
Israel	Jul-Dec	200	197	185	-6%	20	0.4%
India	Jan-Jun	162	162	162	0%	21	0.4%
France	Jul-Dec	142	160	170	6%	22	0.4%
South Africa	Jan-Jun	120	160	140	-13%	23	0.4%
Peru	Jan-Jun	125	150	150	0%	24	0.3%
Australia	**Jan-Jun**	**227**	**110**	**211**	**92%**	**25**	**0.2%**
Hungary	Jul-Dec	80	110	120	9%	26	0.2%
Morocco	Jul-Dec	100	100	100	0%	27	0.2%
Senegal	Jan-Jun	73	73	73	0%	28	0.2%
Syria	Jul-Dec	40	40	40	0%	29	0.1%

Thailand	Jan-Jun	40	40	40	0%	30	0.1%
Mexico	Jan-Jun	40	40	40	0%	31	0.1%
Bulgaria	Jul-Dec	40	37	60	62%	32	0.1%
Japan	Jul-Dec	27	26	26	0%	33	0.1%
New Zealand	Jan-Jun	52	25	39	56%	34	0.1%
Czech Republic	Jul-Dec	25	25	25	0%	35	0.1%
Venezuela	Jan-Jun	20	24	14	-42%	36	0.1%
Slovakia	Jul-Dec	20	20	20	0%	37	0.0%
Malta	Jul-Dec	5	8	8	0%	38	0.0%
Total		**38,449**	**44,416**	**45,783**	**3%**		100.0%

6.1.1 World Production by Country ('000 tonnes) (Colvine)

6.2 Outlook

- Looking ahead to the 2024/25 season, it is anticipated that production in Australia will match the offtake in 2023, with current forecasts set at 216,000 payable tonnes.

7 References

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** n.d. denotes where 'no date' could be found for publishing.*