

18 December 2017

## **Tomato Field Trials**

The Directors are pleased to report that field tomato trials using our OHD fluid are due to commence in Echuca Victoria on Monday 18<sup>th</sup> of December.

The trials are a co-venture between the Australian Processing Tomato Research Council [APTRC], The Green Chemistry Unit of Monash University and Greenpower Energy Limited.

The project will be coordinated by Dr Karen Little of Monash University.

A comprehensive report by Monash University describing the scope of the trials will be delivered to the participants in early Q1 2018.

For information we attach the 2017 report of the APTRC.

### **Greenpower Executive Chairman, Gerard King:**

*"Greenpower is excited with the collaboration between ATRC and Monash University and the opportunity to progress our bio-stimulant program with experts in the field".*

### **ENDS**

#### **For further information:**

Gerard King

Chairman of the Board

# **APTRC: Australian Processing Tomato Research Council**

## **Annual Industry Survey 2017**



Compiled by  
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## **Executive Summary**

184,682 tonnes of tomatoes were delivered for processing during the 2016/17 season. This is a decrease of about 33% or 90,166 tonnes on last year's intake. No fruit was obtained from fresh tomato growers this season.

An area totalling around 2,183 hectares was planted by processing tomato growers during the 2016/17 season. A total of 112 hectares were not harvested this season due to rain and high mould counts.

An average yield of around 89.2 tonnes/ha was achieved by processing tomato growers, from harvested area. This was a decrease from the previous year and also from the previous record of 106.1 tonnes/ha achieved in 2014/15.

99.6% of the planted area was irrigated via sub-surface drip irrigation. This was up from 98.3% in the previous year. Only 1 grower in the industry used furrow irrigation during the 2016/17 season, planting a total of 10 hectares.

86% of the planted area was established with transplants, up from 69% the previous year. 2016/17 had the greatest percentage of crops established from transplants ever.

Average yield obtained from harvested area in Victoria equated to 85.2 t/ha, whereas the average yield from harvested area in NSW equated to 99.9 t/ha.

The average tomato soluble solids level was 4.99%.

15 specialist processing tomato grower enterprises supplied the entire intake during the season.

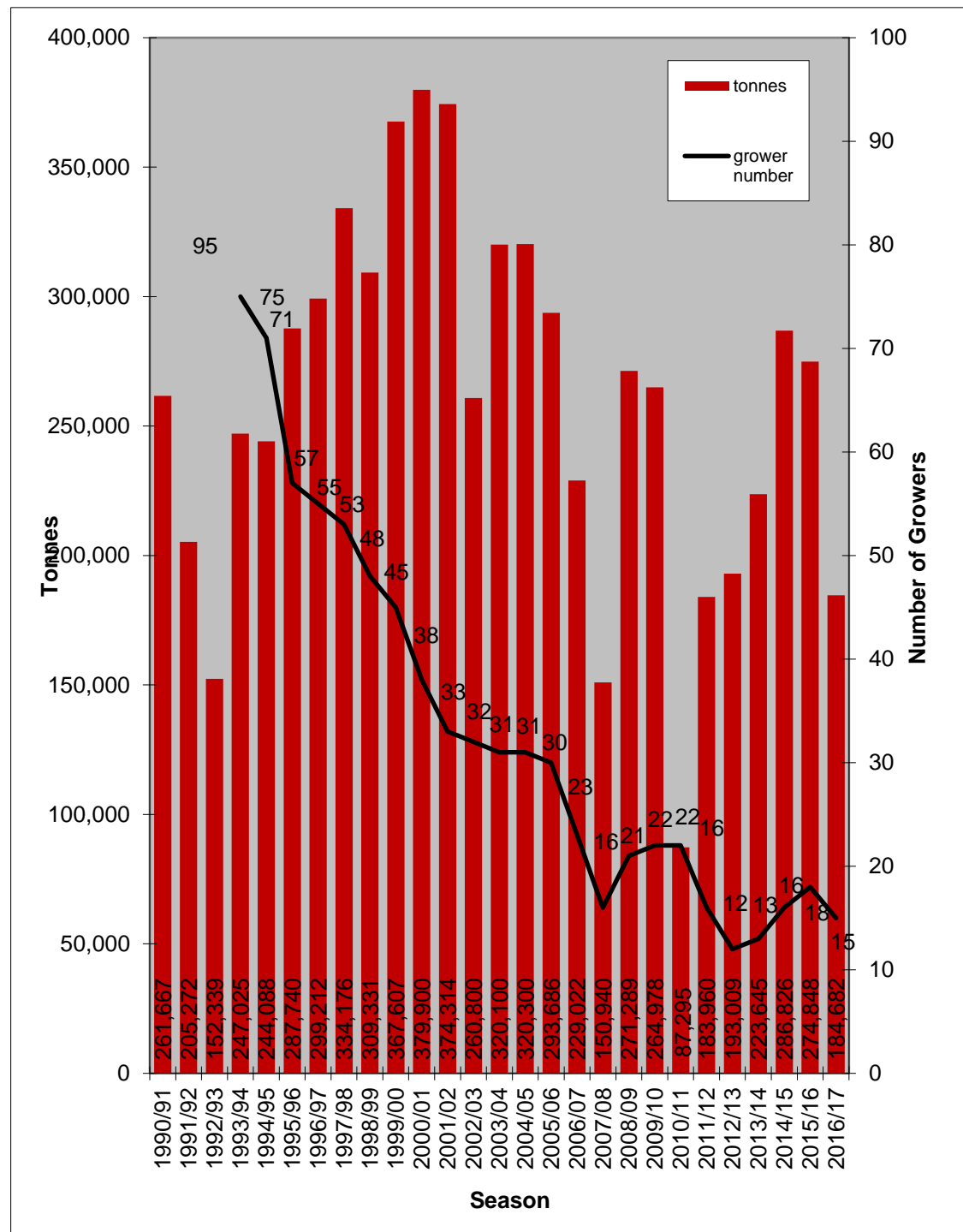
117,997 tonnes of tomato products valued at close to \$154 million were imported during 2016. This equated to a decrease of 3,632 tonnes of processed tomato products. Peeled tomato products, particularly in retail packs, are the major import category.

Exports equated to approximately 19,901 tonnes of product, up from 12,186 in the previous year. However, in raw tomato equivalent terms export volume increased 106% from the previous year.

# 1.0 2017 Survey Results

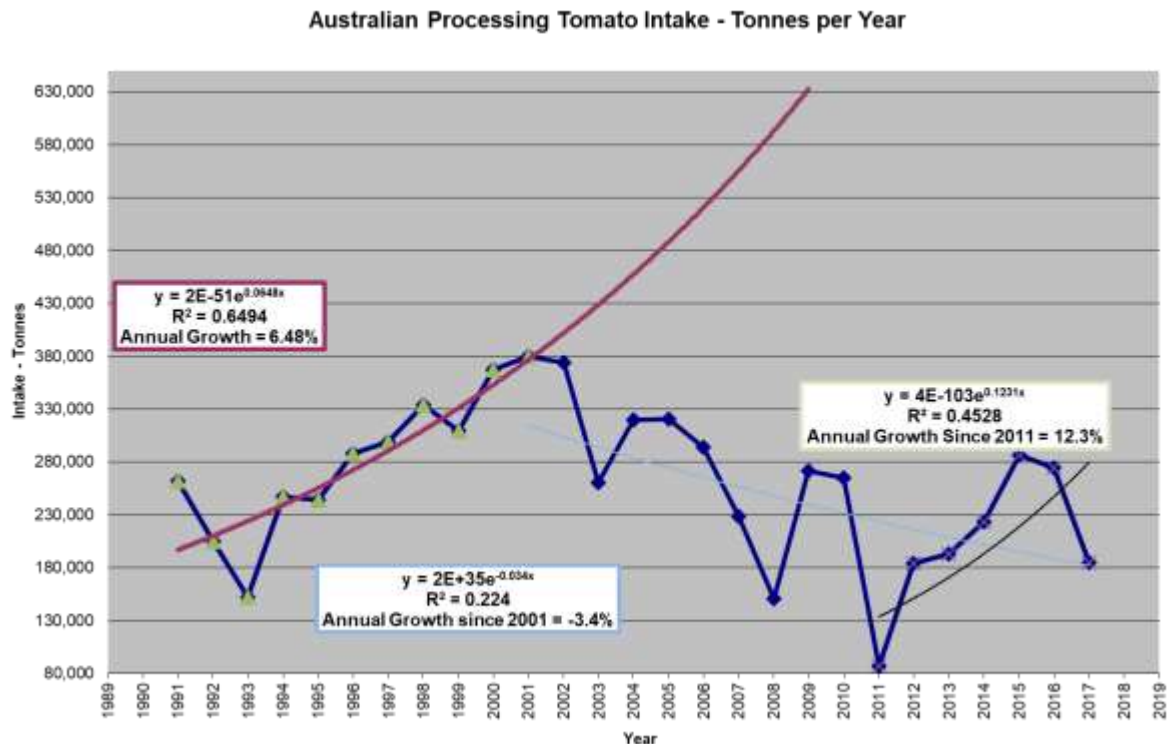
## 1.1 Industry Tonnage

Production from the 2016/17 harvest totalled approximately 184,682 tonnes, a decrease of about 33% on the previous year. No fruit was obtained from fresh tomato growers this season.



**Graph 1.1a. Paid Tomato Tonnes Delivered**

Source: - Industry Survey & Horn, B (2000, 2001, 2002, 2003)



**Graph 1.1b. Paid Tomato Tonnes Delivered, Depicting Annual Growth Trends**  
 NB. Annual trends, in particular since 2001, could be considered a weak relationship

## 1.2 Producers

15 specialist processing tomato grower enterprises supplied the entire intake during the season.

## 1.3 Processors

Three businesses processed tomatoes this year.

The two major processors, SPC Ardmona and Kagome, processed the majority of the total tonnes.

## 1.4 Crop Area and Management

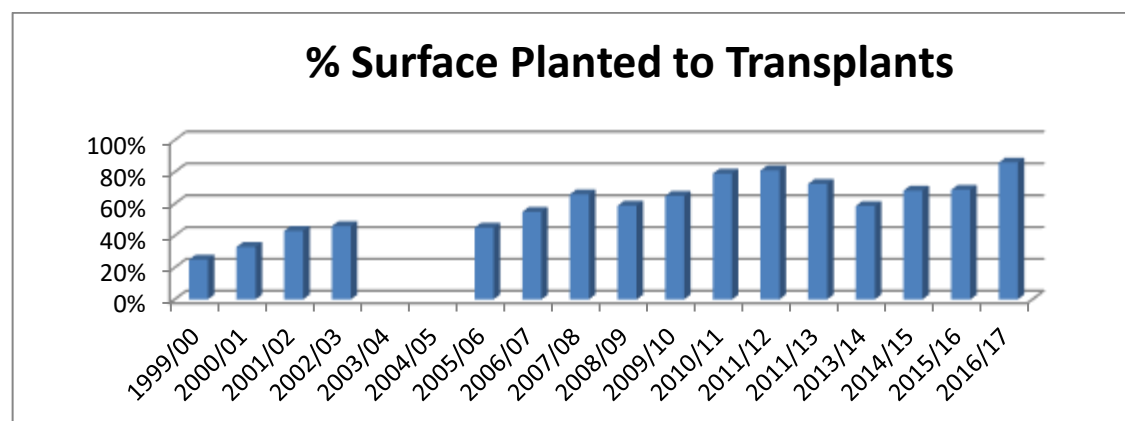
An area totalling around 2,183 hectares was planted by processing tomato growers during the 2016/17 season. A total of 112 hectares were not harvested this season due to heavy rain in April and subsequent mould issues.

The total numbers of hectares established from transplants gradually decreased between 2011/12 to 2013/14, but increased again during the 2014/15 season and remained relatively constant until 2016/17, with 2016/17 having the greatest percentage of crops established from transplants ever.

Season	Hectares (Excl Market Growers)	Hectares Harvested	% Surface Under Drip	% Surface Transplants
1998/99	4,328		48%	21%
1999/00	5,108		49%	25%
2000/01	4,779		53%	33%
2001/02	4,486		55%	43%
2002/03	3,648		62%	46%
2003/04				
2004/05				
2005/06	3,500		65%	45%
2006/07	2,860		68%	55%
2007/08	2,308		74%	66%
2008/09	3,000		76%	57%
2009/10	3,442	2,806	80%	65%
2010/11	2,850	2,074	88%	79%
2011/12	2,366	1,962	90%	81%
2012/13	1,999	1,999	98.5%	72%
2013/14	2,385	2,329	95.0%	59%
2014/15	2,698	2,635	99.9%	68%
2015/16	2,782	2,697	98.3%	69%
2016/17	2,183	2,071	99.6%	86%

**Table 1.4. Penetration of Drip Irrigation and Transplants**

Source: - Industry Survey & Horn, B (2000, 2001, 2002, 2003)



**Graph 1.4. Percentage of Production Area Irrigated by Sub-surface Drip**

Source: - Industry Survey & Horn, B (2000, 2001, 2002, 2003)

Only 1 grower in the industry used furrow irrigation during the 2016/17 season, planting a total of 10 hectares.

559.9 hectares of processing tomatoes were planted in NSW, producing a total of 55,929 tonnes.

This year's harvest commenced on 17 February 2017, considerably later than expected due to the cool season.

Processing came to an abrupt end on 17 May 2017, following heavy rain and subsequent high mould counts.

### 1.5 Field Yields

Average field yields have been calculated based on harvested area since 2009/10. Table 1.5 shows the difference in harvested and planted area since this time.

	Planted Area	Harvested Area	Average Yield (t/ha)		Reason entire area not harvested
			Planted Area	Harvested Area	
<b>2009/10</b>	3443	2806	77.0	94.4	wet harvest
<b>2010/11</b>	2850	2074	28.5	39.2	flooded crop
<b>2011/12</b>	2366	1962	76.8	92.6	wet harvest
<b>2012/13</b>	1999	1998	96.6	96.6	wet late harvest
<b>2013/14</b>	2386	2330	91.4	93.6	wet late harvest
<b>2014/15</b>	2700	2635	103.5	106.1	crop failure early in season
<b>2015/16</b>	2782	2697	98.8	101.9	poor crop stand, delayed harvest, over contract fruit
<b>2016/17</b>	2183	2071	84.6	89.2	delayed harvest due to rain
<b>5 year average</b>	<b>2410</b>	<b>2346</b>	<b>95.0</b>	<b>97.5</b>	

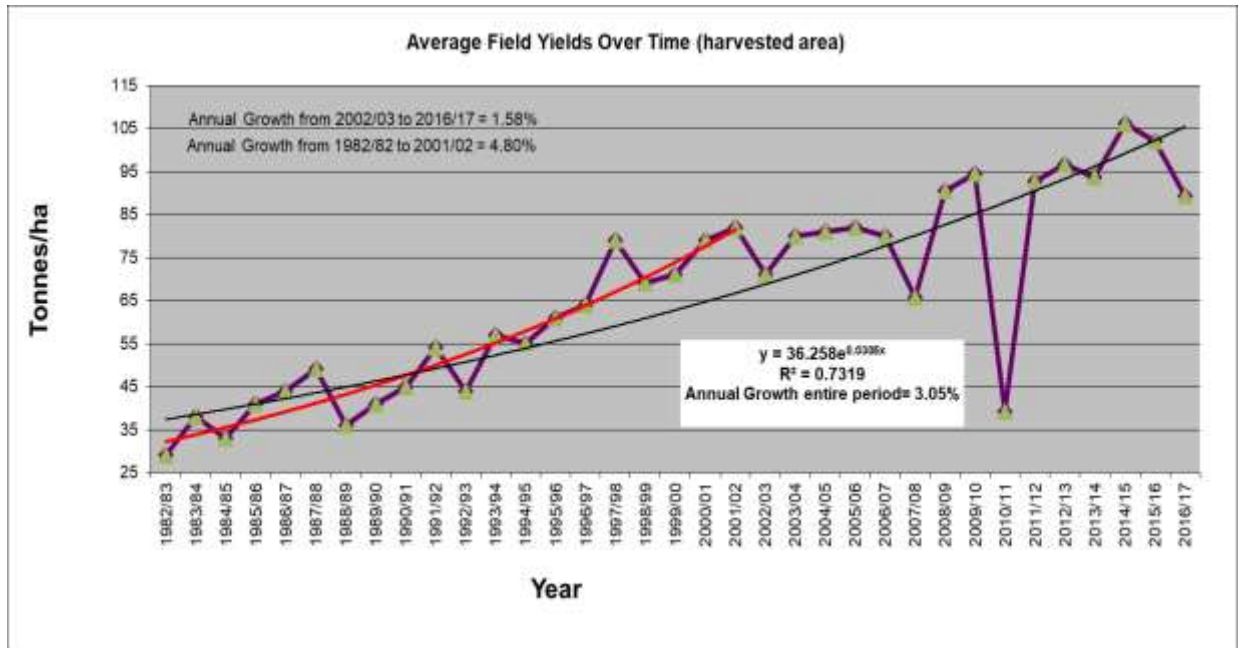
NB. Excludes tonnes obtained from dedicated fresh tomato growers

**Table 1.5. Planted and Harvested area since 2009/10**

An average yield of around 89.2 tonnes/ha was achieved by processing tomato growers, from harvested area. This was a decrease from the previous year and also from the previous record of 106.1 tonnes/ha achieved in 2014/15.

Average yield obtained from harvested area in Victoria equated to 85.2 t/ha, whereas the average yield from harvested area in NSW equated to 99.9 t/ha.

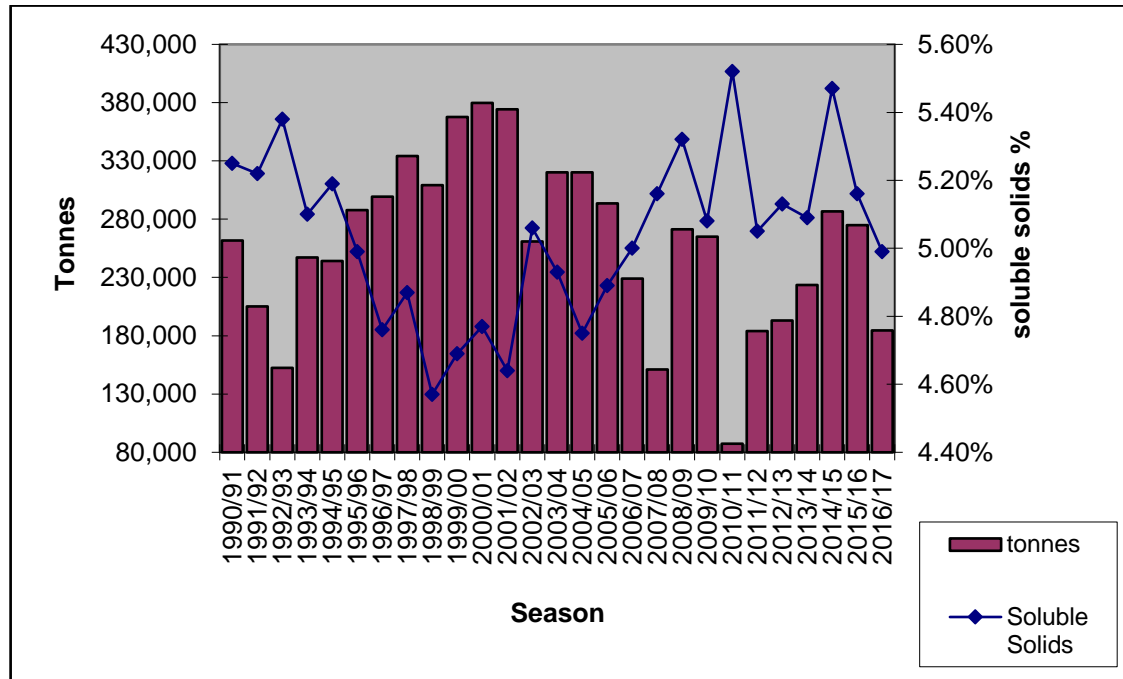




**Graph 1.5. Field Yield Over Time**

Source: - Industry Survey & Horn, B (2000, 2001, 2002, 2003)

## 1.6 Soluble Solids

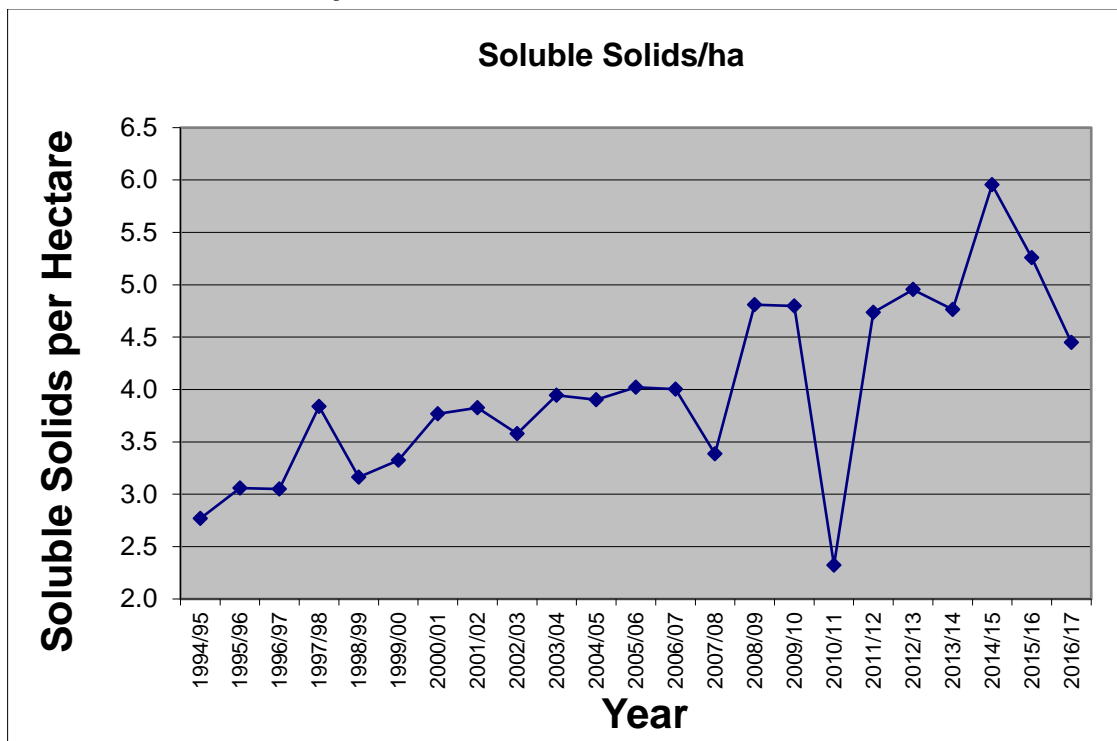


**Graph 1.6. Soluble Solids History**

Source: - Industry Survey & Horn, B (2000, 2001, 2002, 2003)

**Note:** Soluble Solids for 2002/03 are calculated from approximately 180,000 tonnes. Soluble Solids for 2003/04 and 2004/05 are calculated from approximately 265,000 tonnes. Soluble solids for 2006/07 are calculated from approximately 214,500 tonnes. Soluble solids for 2007/08 are calculated from approximately 131,879 tonnes. Soluble solids for 2008/09 are calculated from approximately 251,539 tonnes, and for 2009/10 from approximately 245,791 tonnes. During 2010/11 soluble solids was calculated from 81,745 tonnes, 2011/12 from 170,137 tonnes, 2012/13 from 189,565 tonnes, 2013/14 from 203,665 tonnes and 278,826 tonnes, 2014/15 from 271,479 tonnes, 2015/16 from 266,384 tonnes, 2016/17 from 179,995 tonnes.

## 1.7 Soluble Solids per Hectare



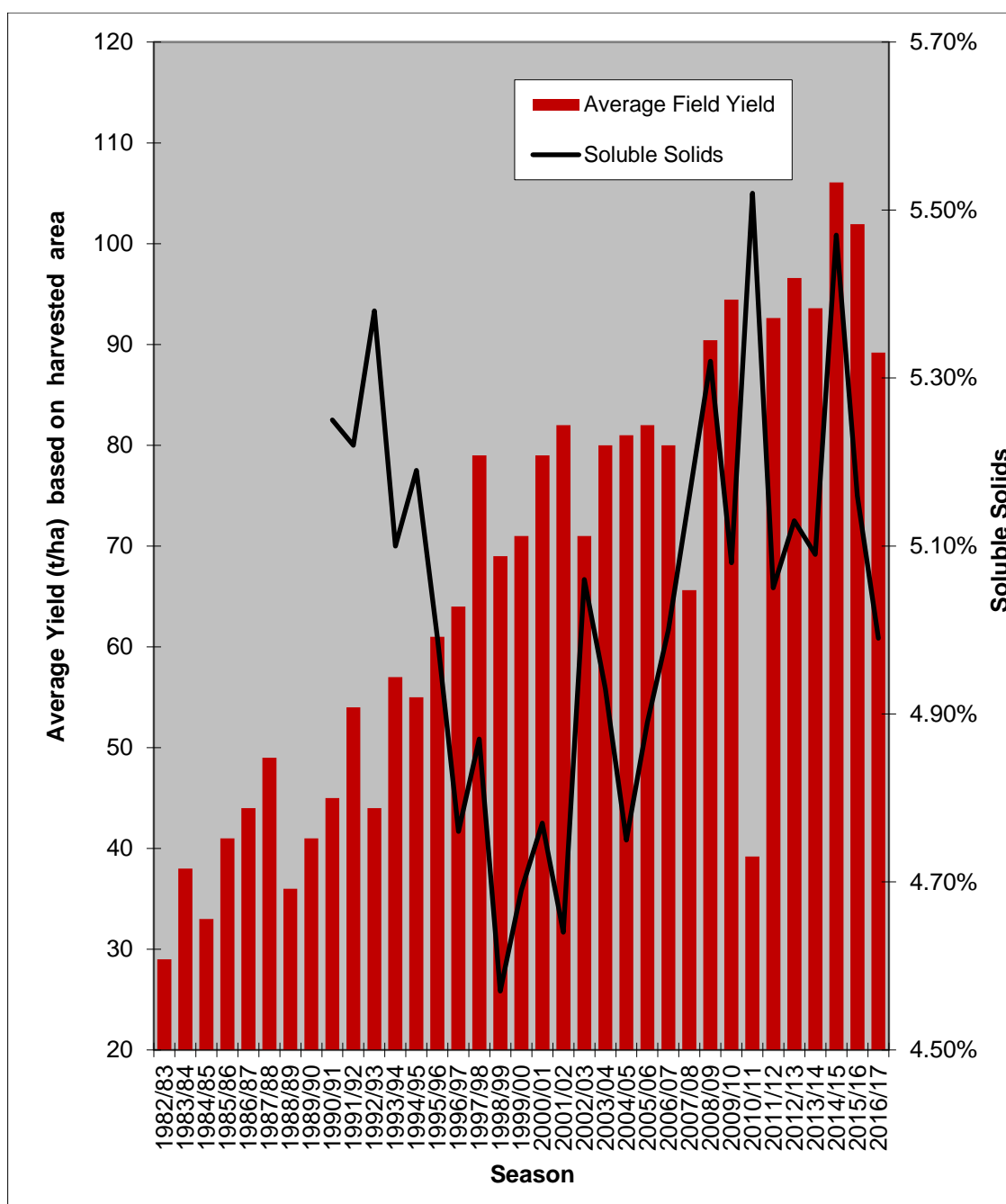
Graph 1.7.a. Soluble Solids per Hectare

	Soluble Solids	Tonnes SS/ha	Tonnes Soluble Solids
1994/95	5.19%	2.769	12,668
1995/96	4.99%	3.059	14,358
1996/97	4.76%	3.051	14,242
1997/98	4.87%	3.839	16,274
1998/99	4.57%	3.164	14,136
1999/00	4.69%	3.324	17,241
2000/01	4.77%	3.767	18,121
2001/02	4.64%	3.826	17,368
2002/03	5.06%	3.578	13,196
2003/04	4.93%	3.945	15,781
2004/05	4.75%	3.901	15,214
2005/06	4.89%	3.988	14,357
2006/07	5.00%	4.003	11,450
2007/08	5.16%	3.353	7,739
2008/09	5.32%	4.811	14,433
2009/10	5.08%	4.797	13,461
2010/11	5.52%	2.290	4,819
2011/12	5.05%	4.735	9,290
2012/13	5.13%	4.953	9,901
2013/14	5.09%	4.763	11,096
2014/15	5.47%	5.954	15,689
2015/16	5.16%	5.259	14,182
2016/17	4.99%	4.450	9,216

Table 1.7.a. National Production of Soluble Solids

Source: - Industry Survey & Horn, B (2000, 2001, 2002, 2003)

NB. Excludes tonnes from fresh market growers



**Graph 1.7.b. Soluble Solids and Average Yield Comparison**  
(excludes tonnes from fresh tomato growers, and based on harvested area)

As shown in Graph 1.7.b soluble solids seem to decrease as average yields increased. In 2008/09 this trend appeared to have changed, as both average yields and soluble solids levels increased in that year. This may have been attributed to a change in the main variety being grown and also a change in general crop nutrition. Following research work conducted by the industry at this time, growers became more aware of crop nutrition and began applying a range of different macro and micro nutrients through fertigation.

From 2015/16 onwards the average soluble solids decreased, along with the average yields. This may possibly be attributed to less new ground being developed for processing tomato crop production.

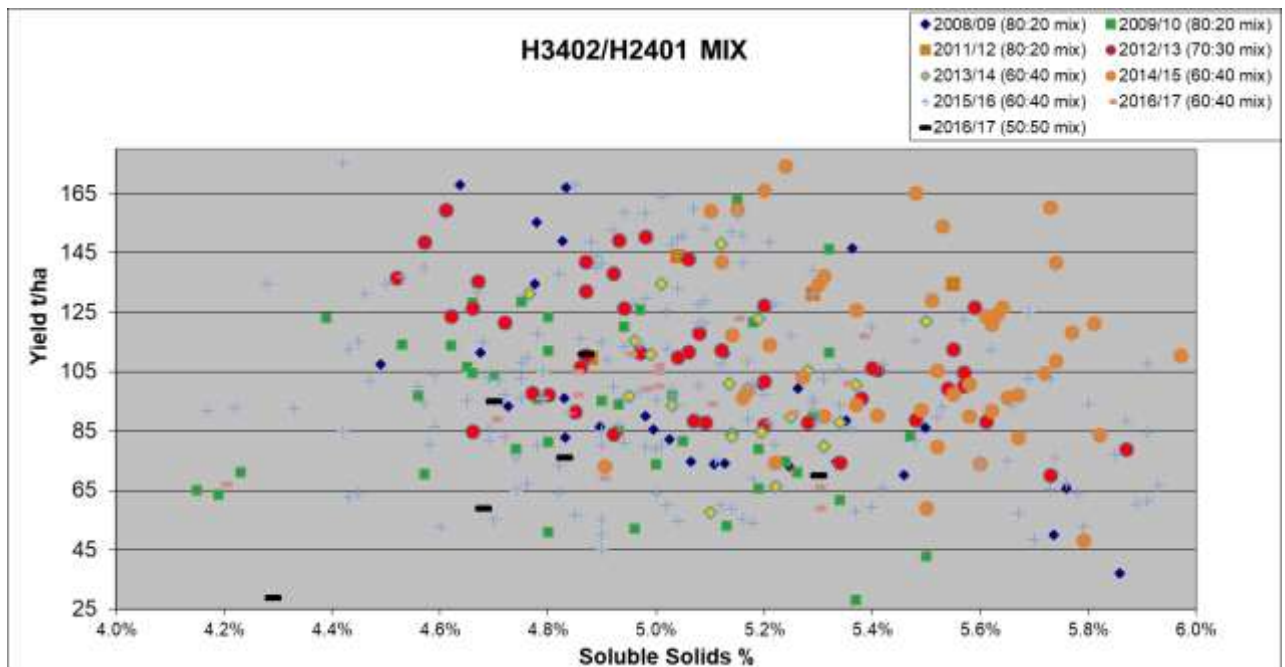
## 1.8 Tomato Varieties

Variety	Hectares planted	%
H3402/H2401 Mix (60:40)	785	36.0%
H3402	329	15.1%
H1015	293	13.4%
H3402/H1175 Mix (50:50)	291	13.3%
H3402/H2401 Mix (50:50)	227	10.4%
H4401	150	6.9%
H3402/H1175 Mix (60:40)	50	2.3%
UG19406	22	1.0%
UG18806	9	0.4%
TCP93800	9	0.4%
HM3888	8	0.4%
H1307	6	0.3%
H1301	6	0.3%
<b>Total</b>	<b>2183</b>	<b>100%</b>

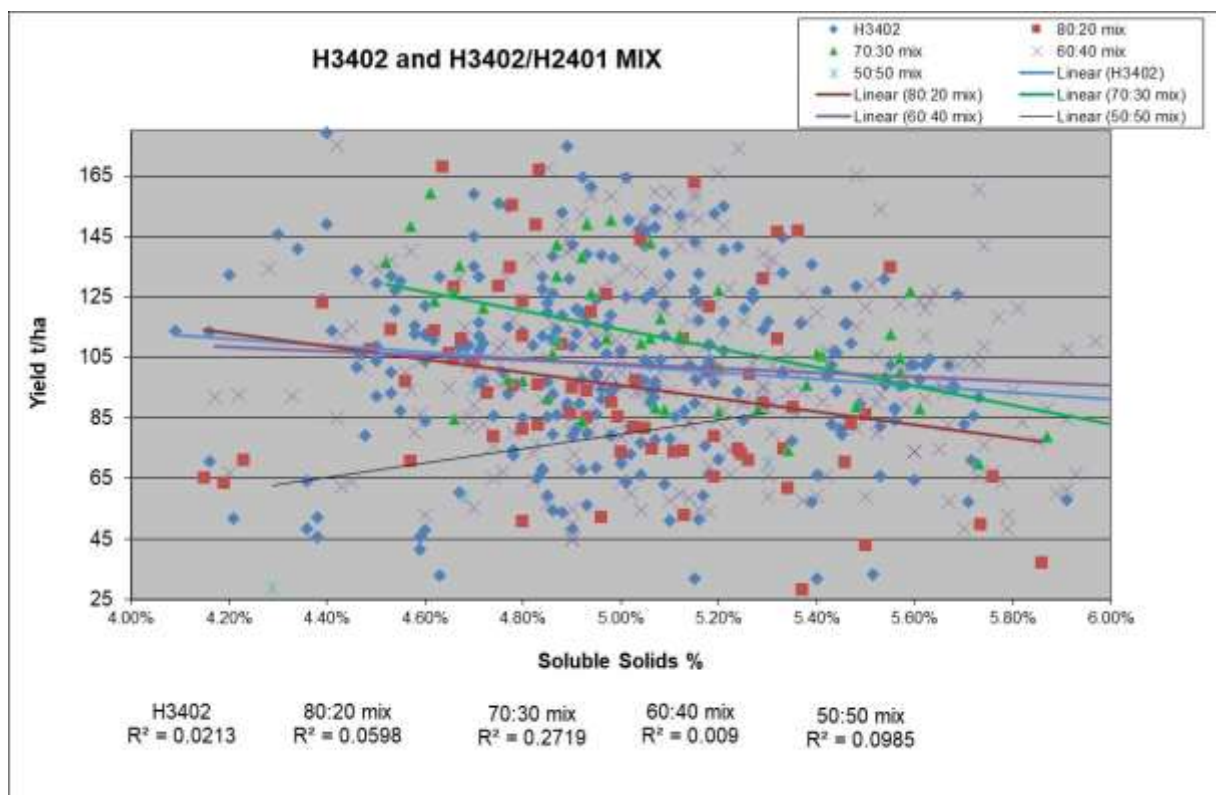
**Table 1.8. Varieties Grown by the Industry**  
Source: - Industry Survey (planted area per variety)

## 1.9 Yield and Solids Performance of the Main Varieties Grown with Drip Irrigation

During the 2016/17 season the main variety grown was H3402/H2401 mix, at the ratio once again of 60:40.



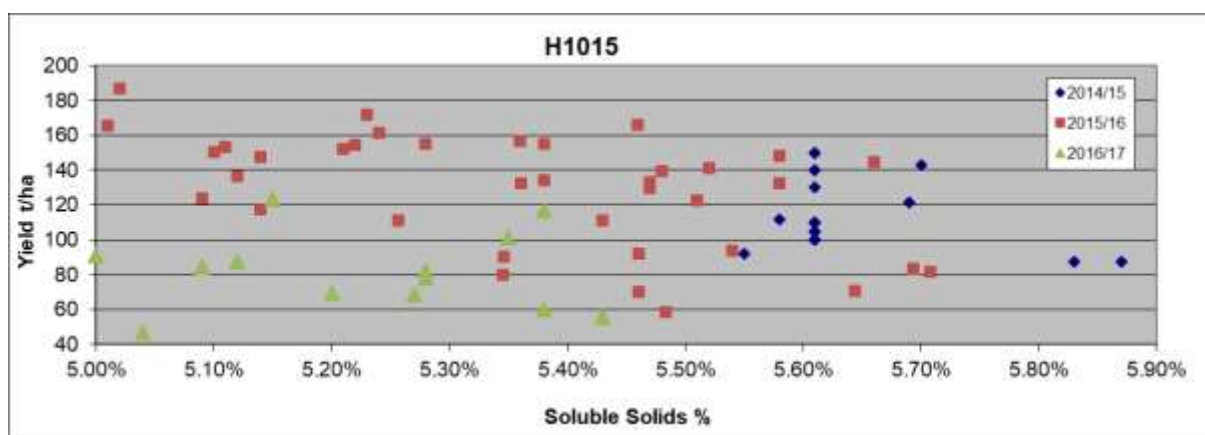
**Graph 1.9.a. H3402/H2401 Yield and Soluble Solids Over the Past 8 Seasons**



**Graph 1.9.b. H3402 and H3402/H2401 Yield and Soluble Solids Over the Past 8 Seasons**

As shown in the above graph yield and solids for H3402 and H3402/H2401 do not appear to be inversely related. As  $R^2$  values become closer to 1.0, the better the fit of the regression line. That is, the closer the line passes through all of the points.

As shown in Graph 1.9.b there does not appear to be any large difference in potential yield or soluble solids of the H3402, compared to the H3402/H2401 mixes.



**Graph 1.9.c. H1015 Yield and Soluble Solids Over the Past 3 Seasons**

H1015 is a newer variety being grown by the major processor for earliness.

### **1.10 Availability of Growers for 2017/18 Season**

At the time of writing no growers have confirmed that they will not be growing during the coming season.

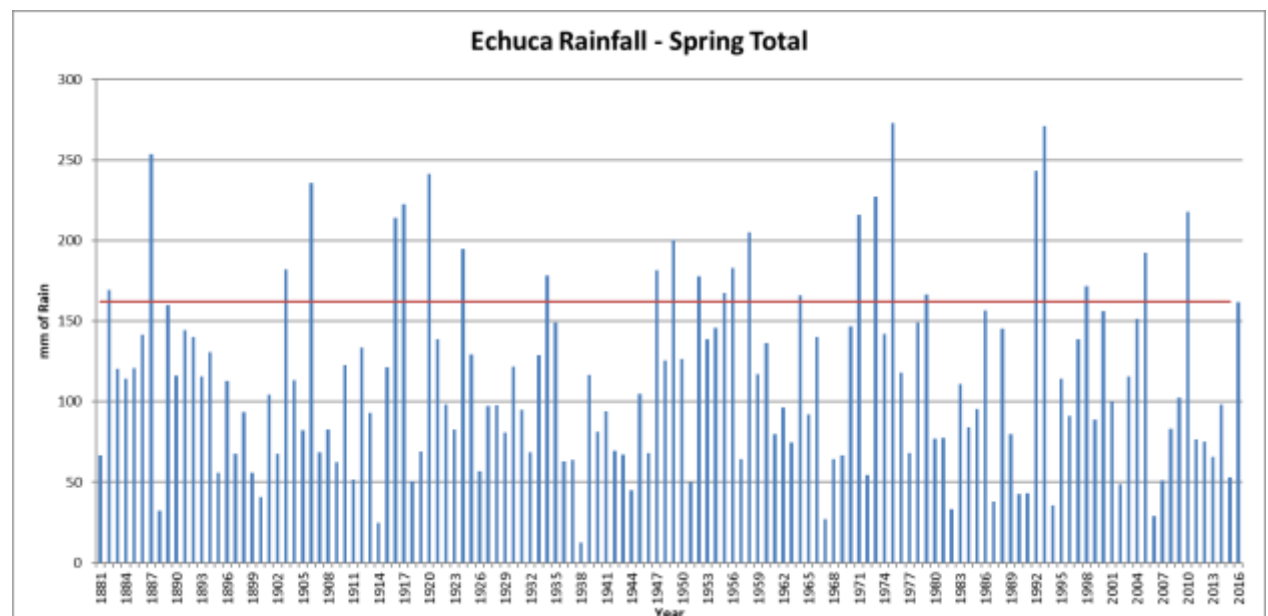
### 1.11 2016/17 Weather

Each season brings a set of new challenges. The 2016/17 season was no different. Large areas received their highest monthly rainfall for September since 1992/3 (Finley and Tocomwal, NSW) and the highest rainfall or the highest rainfall total in over 30 years (Mathoura and Jerilderie). Boort also received the highest rainfall in September on record since 1921. The mean daily maximum and minimum temperatures were also cooler than average across the production region during both September and October. These conditions delayed not only planting of the early crops, but also slowed the growth of crops that were planted.

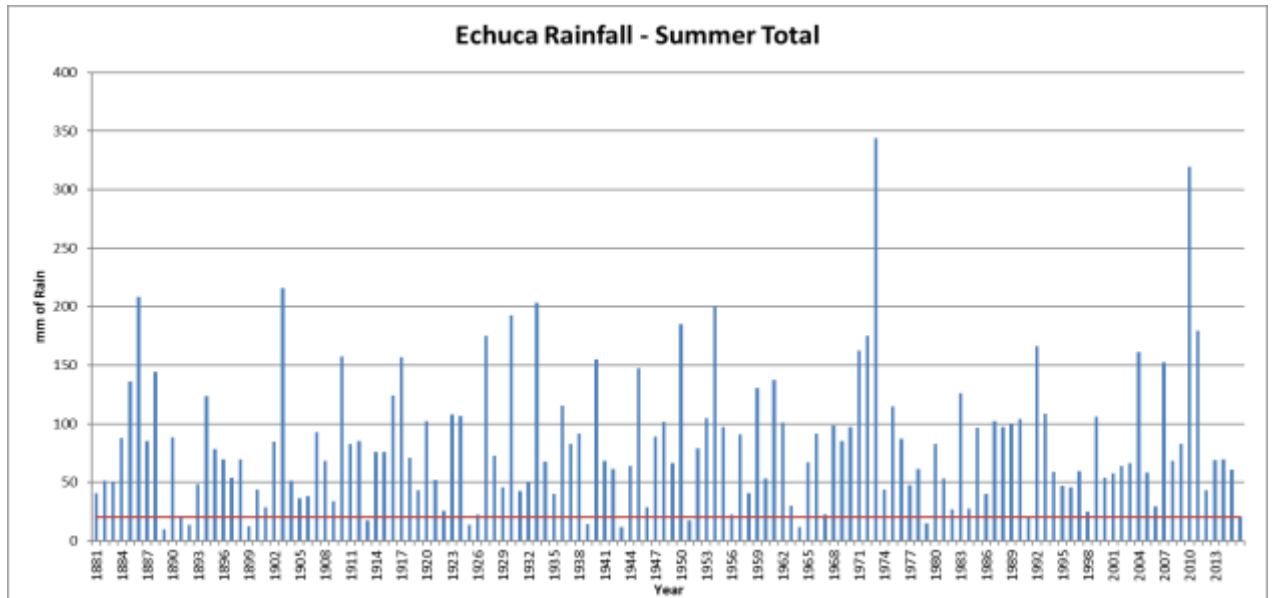
During November the rain ceased, although nights did remain cooler than average across the production region. The mean daily maximum and minimum temperatures were also warmer than average across the production region during December and January.

The weather conditions during February were variable, with Tatura recording the lowest daily minimum temperature since 1998. These variable and low temperatures did slow the ripening of the fruit, and delayed the start of harvest until 17 February 2017.

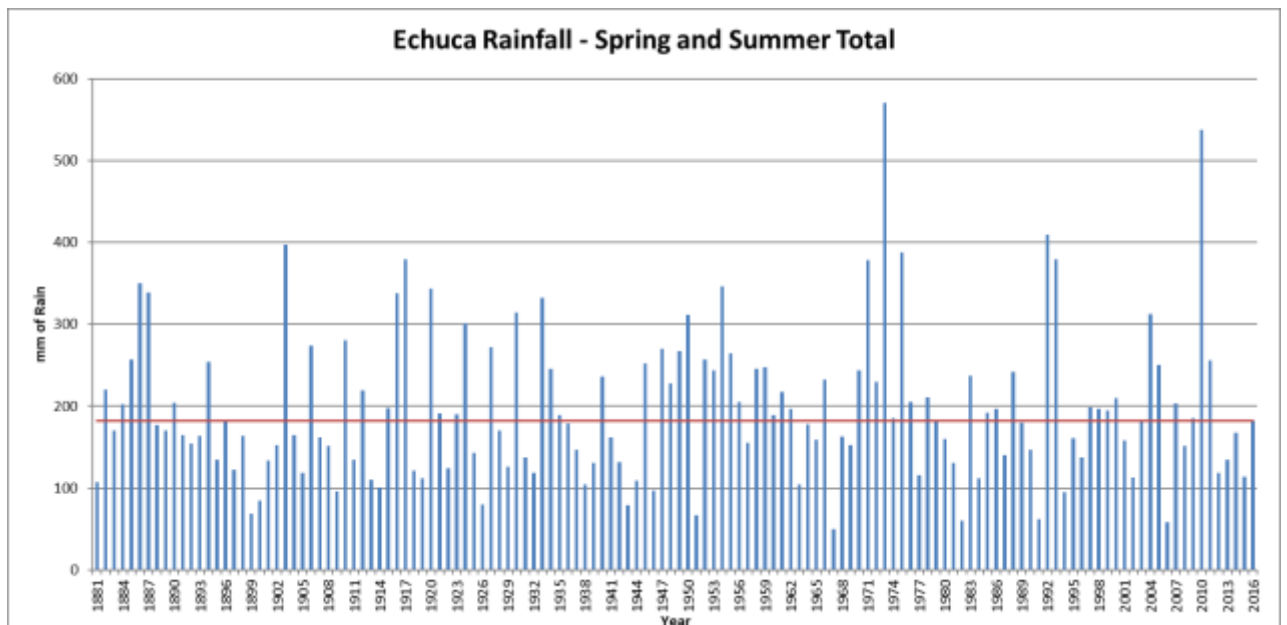
During March and early to mid-April the weather stayed dry and warm, with some areas recording their highest mean maximum temperature on record. This enabled harvest to continue relatively unhindered by weather events. This all changed around at the end of April, with Echuca receiving the highest daily rainfall since 1929 on 22 April, and subsequently the highest total rainfall for April on record. As a result of these heavy rainfall events and the stopping and starting of harvest in late April the season came to an abrupt end on 17 May due to high mould counts. (Data from <http://www.bom.gov.au/>)



Graph 1.11a. Historical Spring Rainfall Data for Echuca

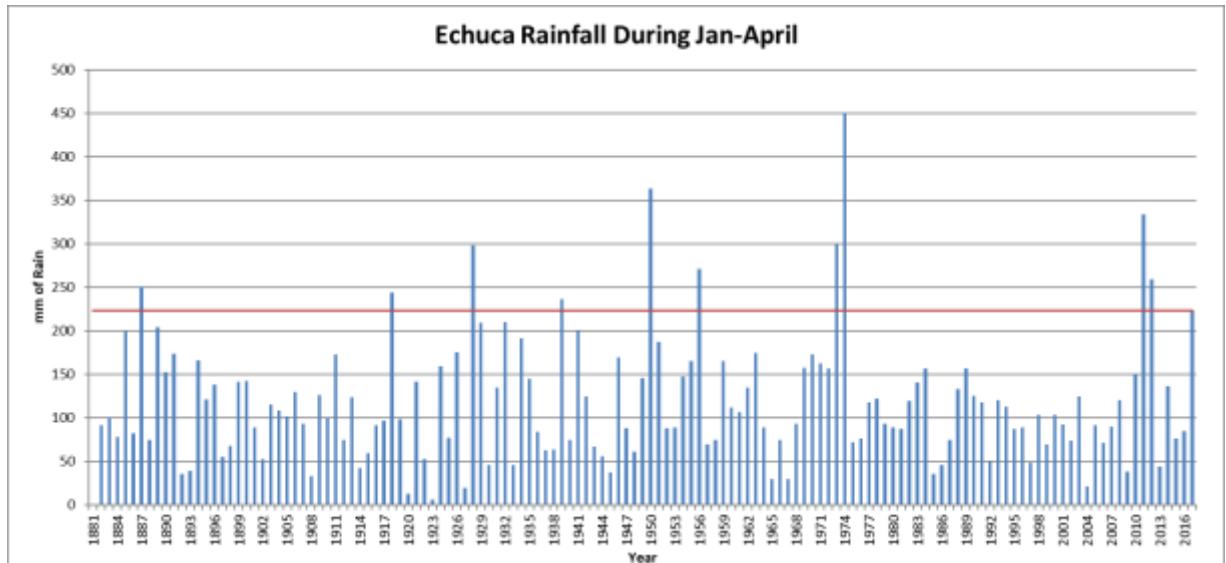


**Graph 1.11b. Historical Summer Rainfall Data for Echuca**

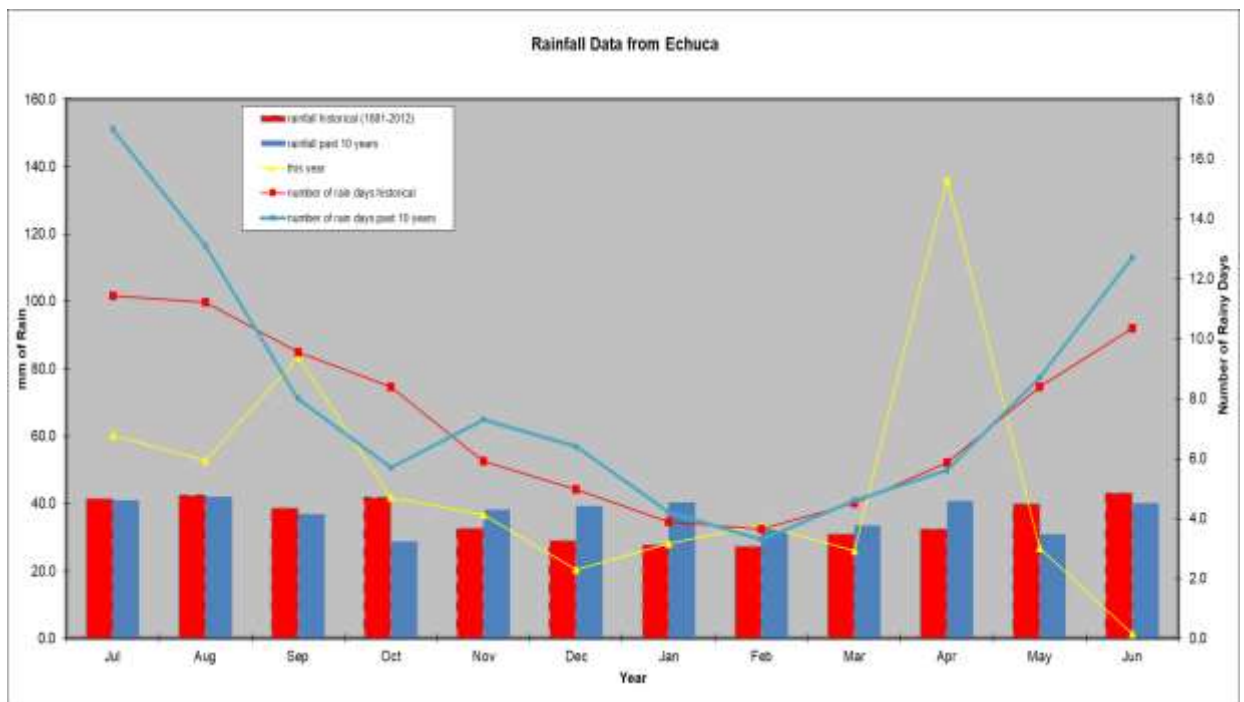


**Graph 1.11c. Historical Combined Spring and Summer Rainfall Data for Echuca**

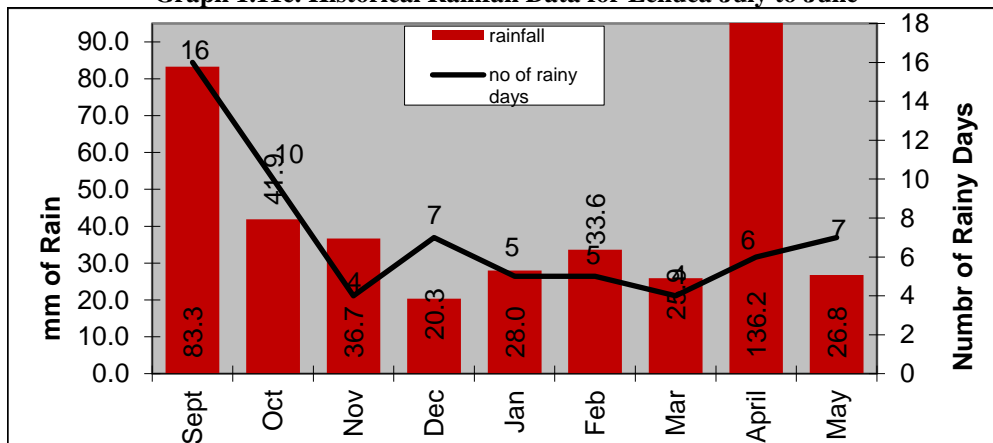




Graph 1.11d. Historical Rainfall Data for Echuca Jan to April



Graph 1.11e. Historical Rainfall Data for Echuca July to June



Graph 1.11f. 2016/17 Monthly Rainfall Data for Echuca

## 2.0 Australian Market Overview

### 2.1 Imports

117,997 tonnes of tomato products valued at close to \$154 million were imported during 2016. This equated to a decrease of 3,631 tonnes of processed tomato products. Peeled tomato products, particularly in retail packs, continue to be the major import category.

Product	2006		2007		2008		2009		2010		2011		2012		2013		2014		2015		2016	
	\$'000	Tonne	\$'000	Tonne	\$'000	Tonne	\$'000	Tonne	\$'000	Tonne	\$'000	Tonne	\$'000	Tonne	\$'000	Tonne	\$'000	Tonne	\$'000	Tonne	\$'000	Tonne
Dried/powder	8,286	1,778	8,696	1,888	8,890	1,783	7,380	1,786	8,140	1,815	9,101	2,718	8,779	1,958	9,444	1,956	9,559	1,797	8,037	1,344	9,188	1,725
Peeled/pieces																						
In packs <1.14L	24,783	26,494	31,538	32,888	51,257	44,215	39,683	36,335	48,431	44,573	43,889	45,792	41,876	44,703	43,436	43,691	45,003	38,782	48,008	41,111	45,263	37,240
In packs >1.14 L	6,357	8,230	9,825	11,916	13,085	13,742	9,530	11,034	10,031	13,445	12,692	17,677	12,248	16,964	14,322	17,191	25,506	25,820	25,274	25,535	19,175	20,907
All peeled/pcs	31,140	34,724	41,363	44,804	64,342	57,957	49,213	47,369	58,462	58,018	56,580	63,469	54,124	61,667	57,758	60,882	70,509	64,602	73,282	66,646	64,438	58,147
Paste/puree																						
In packs <1.14 L	7,453	6,996	9,206	8,167	12,645	9,532	12,727	9,050	14,786	11,705	11,672	10,806	12,874	12,247	15,149	13,434	18,962	13,996	22,874	16,788	22,975	17,122
In packs >1.14 L	9,428	10,357	20,358	22,038	38,344	36,978	18,754	18,389	16,908	17,852	33,824	40,385	20,953	24,788	20,902	24,202	19,033	18,207	21,721	17,144	24,722	21,695
All paste/puree	16,881	17,353	29,564	30,205	50,989	46,510	31,481	27,439	31,694	29,557	45,496	51,191	33,827	37,035	36,051	37,636	37,995	32,203	44,596	33,932	47,696	38,817
Juice	123	88	101	75	41	30	62	40	74	78	179	130	238	240	114	125	128	105	106	69	67	76
(Litres*1,000)																						
Sauce/ketchup	11,861	7,879	11,554	7,828	12,109	7,844	10,845	7,207	14,628	11,157	14,716	13,380	7,096	14,451	24,187	16,817	31,317	19,314	33,676	19,638	33,258	19,231
(Litres*1,000)																						
Total	68,291	61,822	91,278	84,800	136,371	114,123	98,980	83,841	112,998	100,625	126,073	130,888	104,065	115,351	127,554	117,416	149,508	118,021	159,696	121,628	154,646	117,997

**Table 2.1.A. Imports of Tomato Products<sup>1</sup>**

Source: - Australian Bureau of Statistics

Import volume was equivalent to about 369,918 tonnes of raw tomatoes, a 6.5% decrease from the previous year.

Product	Factor	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Dried/powder	20	35,560	37,760	35,660	35,720	36,291	54,358	39,155	39,125	35,940	26,875	34,506
Whole/pcs <1.14L	1.1	29,143	36,177	48,636	39,969	49,030	50,371	49,173	48,060	42,660	45,222	40,965
Whole/pcs >1.14L	1.1	9,053	13,108	15,116	12,137	14,790	19,445	18,661	18,911	28,402	28,088	22,997
Paste/puree <1.14L	6.0	41,976	49,002	57,194	54,301	70,232	64,835	73,484	80,602	83,976	153,210	102,733
Paste/puree >1.14L	6.0	62,142	132,228	221,866	110,332	107,112	242,310	148,728	145,214	109,242	102,866	130,171
Juice[1]	1.1	96.8	82.5	33	43	86	143	264	137	116	75	83
Sauce/ketchup	2	15,758	15,656	15,688	14,415	22,314	26,760	28,902	33,633	38,628	39,276	38,462
<b>Total Tomato</b>		<b>193,729</b>	<b>284,013</b>	<b>394,193</b>	<b>266,916</b>	<b>299,855</b>	<b>458,223</b>	<b>358,367</b>	<b>365,682</b>	<b>338,964</b>	<b>395,613</b>	<b>369,918</b>

NB. Conversion factor for paste/puree was changed from 5.5 to 6.0 in 2010

[1] Juice exports are recorded in litres. In this report, one litre of juice is assumed to weigh one kilogram.

**Table 2.1.B. Equivalent Tonnes Raw Tomato Imported<sup>2</sup>**

Source: - Australian Bureau of Statistics and ATPA Conversion Factors

NB. Conversion factor for paste/puree has changed from 5.5 to 6.0 as reported in industry reports prior to 2011

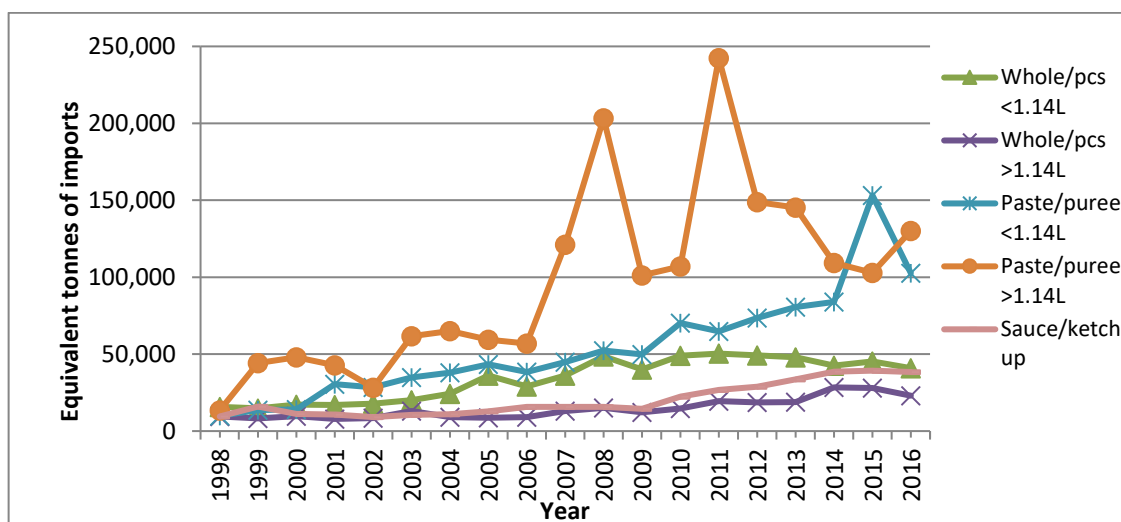
<sup>1</sup> Trade statistics relating to juice and sauce report quantities in litres rather than kilograms. Throughout this report, one litre of product is assumed to weigh one kilogram.

<sup>2</sup> The Australian Tomato Processors Association previously provided the product to raw material conversion factors used throughout this report from Horn, B (2003).

Product	\$'000	% of Tonnes	Tonnes	\$/kg
<b>Dried/powder</b>				
<b>Total</b>	<b>\$9,188</b>		<b>1725</b>	<b>\$5.33</b>
Turkey	\$6,033	60%	1,032	\$5.85
New Zealand	\$489	11%	183	\$2.68
Portugal	\$481	6%	105	\$4.58
<b>Whole/pieces &lt;1.14L</b>				
<b>Total</b>	<b>\$45,263</b>		<b>37,240</b>	<b>\$1.22</b>
Italy	\$41,599	97%	36,006	\$1.16
Turkey	\$2,705	2%	599	\$4.52
New Zealand	\$317	1%	237	\$1.34
<b>Whole/pieces &gt;1.14L</b>				
<b>Total</b>	<b>\$19,175</b>		<b>20,907</b>	<b>\$0.92</b>
Italy	\$14,647	83%	17,379	\$0.84
USA	\$2,354	12%	2,510	\$0.94
China	\$559	2%	430	\$1.30
<b>Paste/puree &lt;1.14L</b>				
<b>Total</b>	<b>\$22,975</b>		<b>17,122</b>	<b>\$1.34</b>
Italy	\$15,926	75%	12,763	\$1.25
China	\$4,470	15%	2,602	\$1.72
USA	\$1,301	6%	1,052	\$1.24
<b>Paste/puree &gt;1.14L</b>				
<b>Total</b>	<b>\$24,722</b>		<b>21,695</b>	<b>\$1.14</b>
USA	\$9,794	45%	9,816	\$1.00
China	\$6,016	22%	4,847	\$1.24
Italy	\$4,802	22%	4,781	\$1.00
<b>Tomato Juice</b> (Litres*1000)				
<b>Total</b>	<b>\$67</b>		<b>76</b>	<b>\$0.88</b>
USA	\$41	87%	66	\$0.62
United Kingdom	\$20	8%	6	\$3.25
Ukraine	\$2	3%	2	\$0.88
<b>Sauce/ketchup</b> (Litres*1,000)				
<b>Total</b>	<b>\$33,258</b>		<b>19,231</b>	<b>\$1.73</b>
Italy	\$20,941	54%	10,468	\$2.00
New Zealand	\$4,333	16%	3,149	\$1.38
China	\$2,703	12%	2,300	\$1.18

**Table 2.1.C. Main Sources of Imports in 2016**

Source: - Australian Bureau of Statistics



Graph 2.1 2016/17 Equivalent Tonnes of Imports

Based on the above table are the following:

- Majority of Dried Tomato imports are from Turkey at 1,032 tonnes, an increase of 34.0% from 770 tonnes in 2015.
- Majority of Whole/pieces are imported from Italy, at 53,385 tonnes, a decrease of 10.8% from 59,874 tonnes in 2015.
- Majority of Paste <1.14 litres imports are from Italy at 12,763 tonnes, an increase of 6.7% from 11,958 tonnes in 2015.
- Majority of Paste >1.14 litres imports are from USA at 9,816 tonnes, an increase of 25.3% from 7,837 tonnes in 2015.
- Majority of the Juice imports are from USA at 66 thousand litres, whereas the previous year the majority of the juice imports came from Thailand.
- Majority of the Sauce/Ketchup imports are from Italy at 10,468 thousand litres, an increase of 8.7% from 9,628 thousand litres in 2015.

## 2.2 Exports

Product	2006		2007		2008		2009		2010		2011		2012		2013		2014		2015		2016	
	\$'000	Tonne	\$'000	Tonne	\$'000	Tonne	\$'000	Tonne	\$'000	Tonne	\$'000	Tonne	\$'000	Tonne	\$'000	Tonne	\$'000	Tonne	\$'000	Tonne	\$'000	Tonne
Whole/pieces	5,819	2,799	5,757	1,645	5,442	2,077	6,166	2,417	3,419	869	2,581	941	3,744	1,437	2,926	977	2,818	2,320	2,612	678	2,027	419
Paste/puree	2,856	918	1,870	819	959	595	1,281	802	1,040	650	1,011	541	2,368	1,915	3,156	2,498	7,278	5,633	8,777	7,291	16,337	17,420
Sauce/ketchup	8,996	4,358	8,559	3,930	10,003	4,799	7,453	4,444	11,329	5,266	10,238	4,667	5,236	2,067	3,996	1,609	4,267	1,762	9,923	4,098	5,210	2,020
Juice[1]	666	282	706	497	394	242	72	60	46	43	191	183	275	215	223	203	202	177	143	119	79	52
<b>Total</b>	<b>18,337</b>	<b>8,357</b>	<b>16,892</b>	<b>6,891</b>	<b>16,798</b>	<b>7,713</b>	<b>14,972</b>	<b>7,722</b>	<b>15,833</b>	<b>6,828</b>	<b>14,021</b>	<b>6,332</b>	<b>11,623</b>	<b>5,634</b>	<b>10,302</b>	<b>5,288</b>	<b>14,565</b>	<b>9,892</b>	<b>21,456</b>	<b>12,186</b>	<b>23,652</b>	<b>19,910</b>

[1] Juice exports are recorded in litres. In this report, one litre of juice is assumed to weigh one kilogram.

Table 2.2.A. Exports of Tomato Products

Source: - Australian Bureau of Statistics

Exports equated to approximately 19,901 tonnes of product, up from 12,186 in the previous year. However, in raw tomato equivalent terms export volume has increased 106% from the previous year.

Product	Factor	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Whole/pieces	1.1	2,627	3,079	1,810	2,285	2,658	956	1,035	1,581	1,075	2,552	746	461
Paste/puree	6	18,198	5,508	4,914	3,570	4,810	3,900	3,248	11,492	14,987	33,800	43,747	104,518
Sauce/ketchup	2	8,936	8,716	7,860	9,598	8,888	10,532	9,334	4,134	3,218	3,524	8,196	4,039
Juice [1]	1.1	735	310	547	266	66	47	201	237	224	195	131	57
<b>Total Tomato</b>		<b>30,496</b>	<b>17,613</b>	<b>15,130</b>	<b>15,719</b>	<b>16,422</b>	<b>15,435</b>	<b>15,830</b>	<b>19,455</b>	<b>21,518</b>	<b>42,084</b>	<b>52,819</b>	<b>109,075</b>

NB. Conversion factor for paste/puree has changed from 5.5 to 6.0 in 2010

**Table 2.2.B. Equivalent Tonnes Raw Tomato Exported**

Source: - Australian Bureau of Statistics. ATPA Conversion Factors

- Thailand was once again the most significant export destination, in the paste/puree category, followed by Japan.
- New Zealand remained as the most significant export destination in the sauce/ketchup category again this year.

Product	\$,000	% (of Tonnes)	Tonnes	\$/kg
<b>Whole/pieces</b>				
<b>Total</b>	<b>\$2,027</b>		<b>419</b>	<b>\$4.84</b>
New Zealand	\$373	63%	263	\$1.42
Japan	\$1,081	19%	80	\$13.49
Papua New Guinea	\$61	5%	21	\$2.90
<b>Paste/puree</b>				
<b>Total</b>	<b>\$16,337</b>		<b>17,420</b>	<b>\$0.94</b>
Thailand	\$4,942	43%	7,477	\$0.66
Japan	\$5,115	19%	3,345	\$1.53
Malaysia	\$2,269	15%	2,697	\$0.84
<b>Sauce/ketchup</b>				
<b>Total</b>	<b>\$5,210</b>		<b>2,020</b>	<b>\$2.58</b>
New Zealand	\$3,120	60%	1,214	\$2.57
China	\$609	9%	185	\$3.29
Singapore	\$334	9%	182	\$1.83
<b>Juice (Litres*1000)</b>				
<b>Total</b>	<b>\$79</b>		<b>52</b>	<b>\$1.52</b>
New Zealand	\$21	34%	18	\$1.18
USA	\$7	16%	8	\$0.81
Papua New Guinea	\$5	11%	6	\$0.97

**Table 2.2.C. Major Export Destinations in 2016**

Source: - Australian Bureau of Statistics

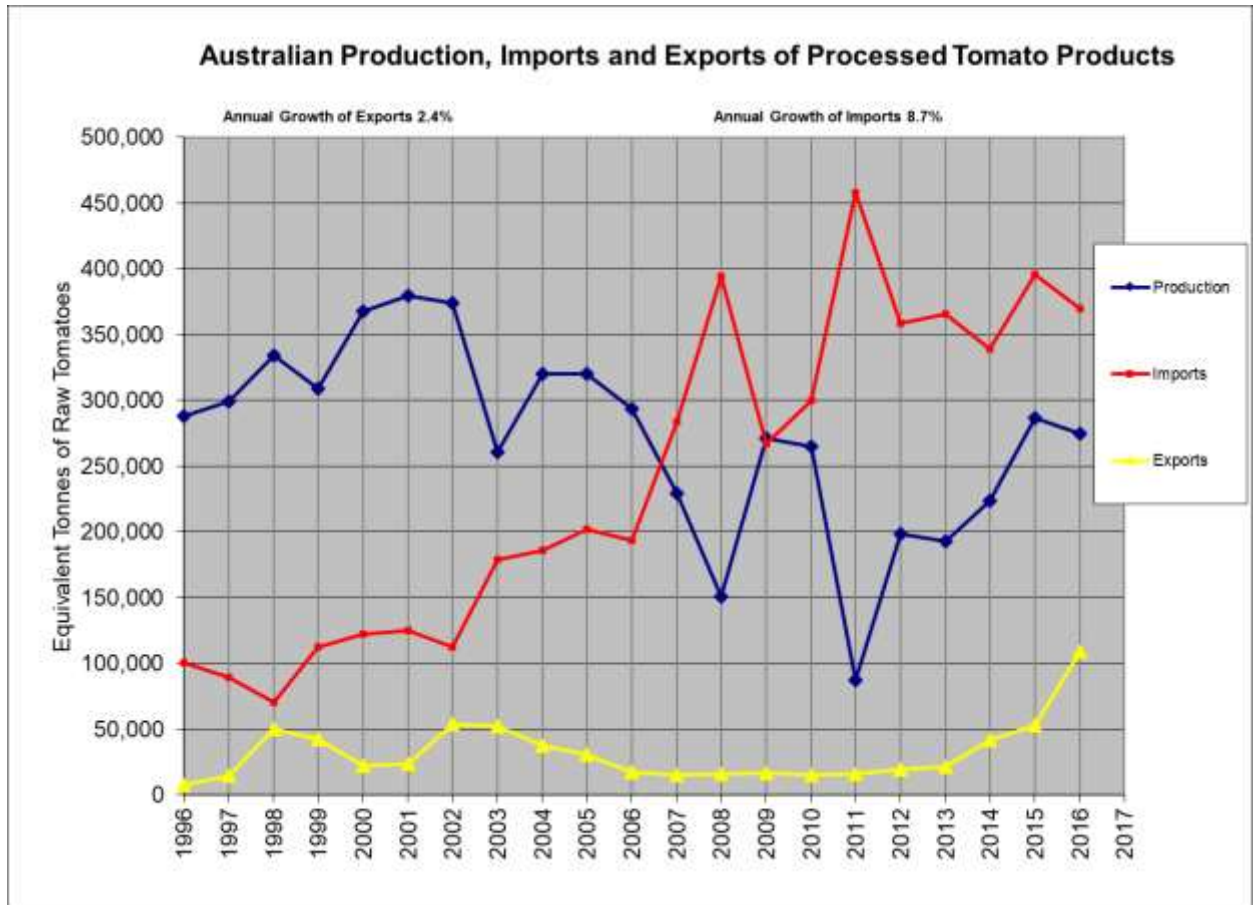
## 2.3 Export and Import Volumes Compared

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Exports	17,613	15,130	15,719	16,422	15,435	15,830	19,455	21,518	42,084	52,819	109,075
Imports	193,729	284,013	394,193	266,916	299,855	458,223	358,367	365,682	338,964	395,613	369,918
<b>Net Imports</b>	<b>176,116</b>	<b>268,883</b>	<b>378,474</b>	<b>250,494</b>	<b>284,420</b>	<b>284,420</b>	<b>338,912</b>	<b>344,164</b>	<b>296,880</b>	<b>342,794</b>	<b>260,843</b>
<b>% Exports/Imports</b>	<b>9%</b>	<b>5%</b>	<b>4%</b>	<b>6%</b>	<b>5%</b>	<b>3%</b>	<b>5%</b>	<b>6%</b>	<b>12%</b>	<b>13%</b>	<b>29%</b>

**Table 2.3. Exports and Imports, Raw Tomato Equivalent Tonnes**

Source: - Australian Bureau of Statistics. ATPA Conversion Factors

NB. Conversion factor for paste/puree has changed from 5.5 to 6.0 in 2010



Graph 2.3. Australian Production, Imports and Exports

## 2.4 Apparent Demand for Tomato Products

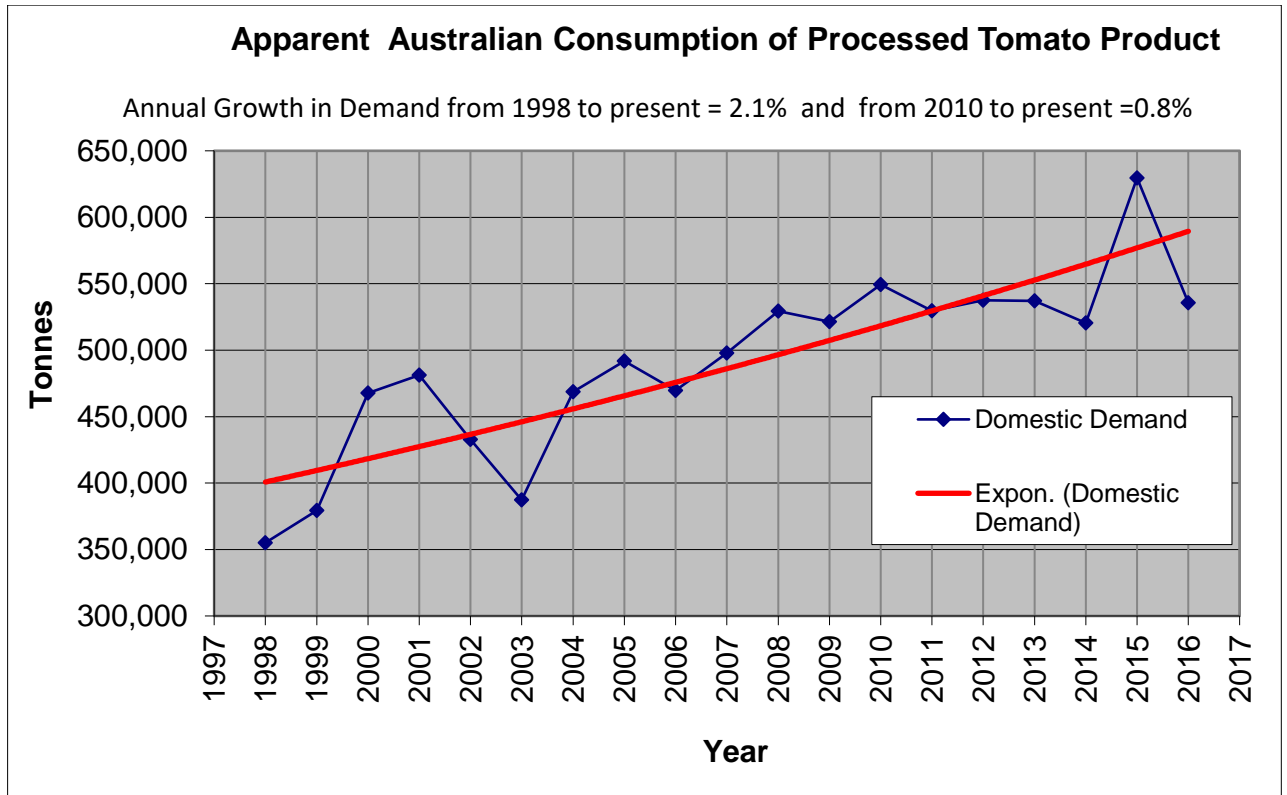
Adding production and import volumes provides an idea of the apparent gross demand for Australian processed tomato. The domestic market size is this total less exports. The analysis is crude as year-end inventory levels are not known and crop years do not exactly coincide with calendar years.

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	3 Year Average
Production	320,000	293,600	229,000	150,940	271,000	264,978	87,295	198,545	193,009	223,645	286,826	274,848	261,773
Plus imports	202,173	193,729	284,013	394,193	266,916	299,855	458,223	358,367	365,682	338,964	395,613	369,918	368,165
Gross demand	522,173	487,329	513,013	545,133	537,916	564,833	545,517	556,912	558,691	562,608	682,439	644,766	629,938
Less exports	30,496	17,613	15,130	15,719	16,422	15,435	15,830	19,455	21,518	42,084	52,819	109,075	67,993
Domestic demand	491,677	469,716	497,883	529,414	521,494	549,398	529,688	537,457	537,173	520,525	629,620	535,691	561,945
Population	20,176,844	20,450,966	20,827,622	21,249,199	21,691,653	22,031,750	22,340,024	22,742,475	23,145,901	23,504,138	23,850,784	24,210,809	23,855,244
per capita consumption (kg/person)	24.37	22.97	23.90	24.91	24.04	24.94	23.71	23.63	23.21	22.15	26.40	22.13	23.56

NB. Conversion factor for paste/puree has changed from 5.5 to 6.0 in 2010

Table 2.4. Apparent Demand for Processing Tomatoes  
(Raw Material Tonnes)

Source: - Estimate Based on Industry Survey & Horn, B (2000, 2001, 2002, 2003) and ABS



**Graph 2.4. Apparent Australian Consumption of Processed Tomatoes**

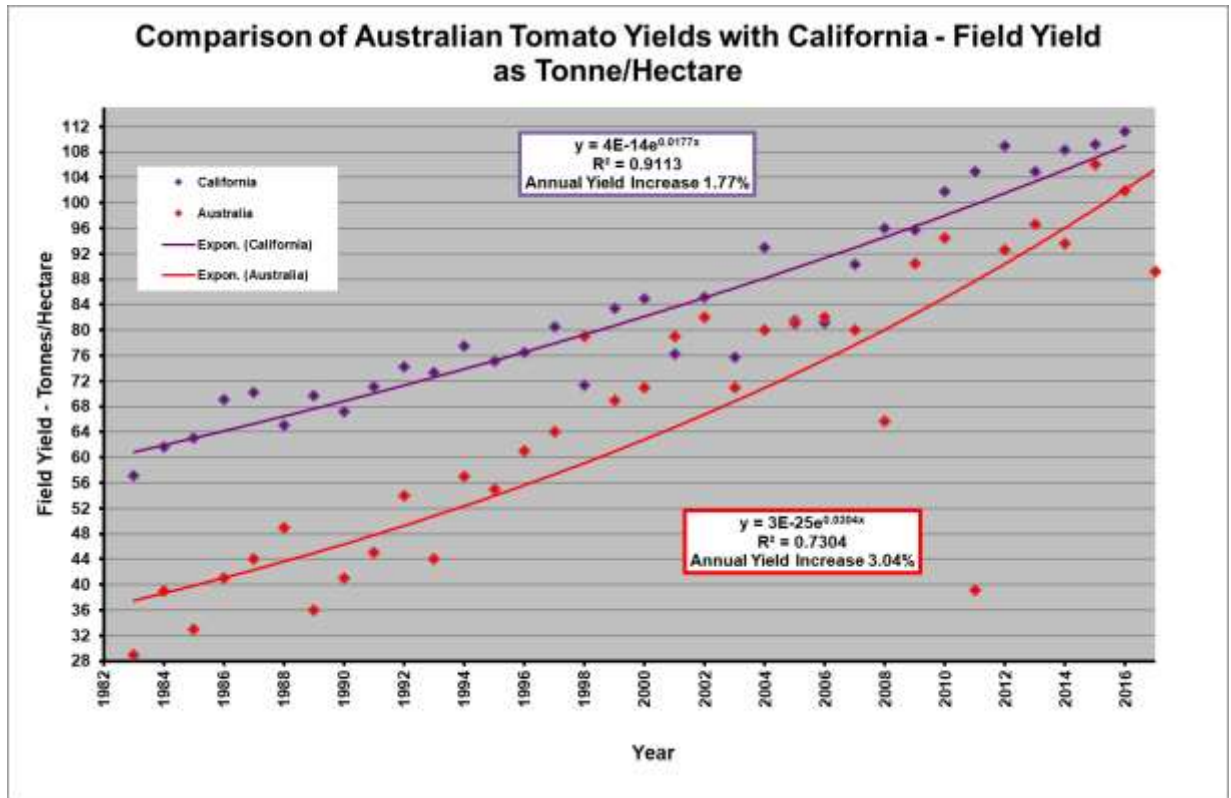
Although apparent Australian consumption has increased since 1998 at a rate of 2.1%, apparent Australian consumption has only actually increased since 2010 at a rate of 0.8%, although the per capita consumption has decreased.

### 3.0 Australian and Californian Comparison

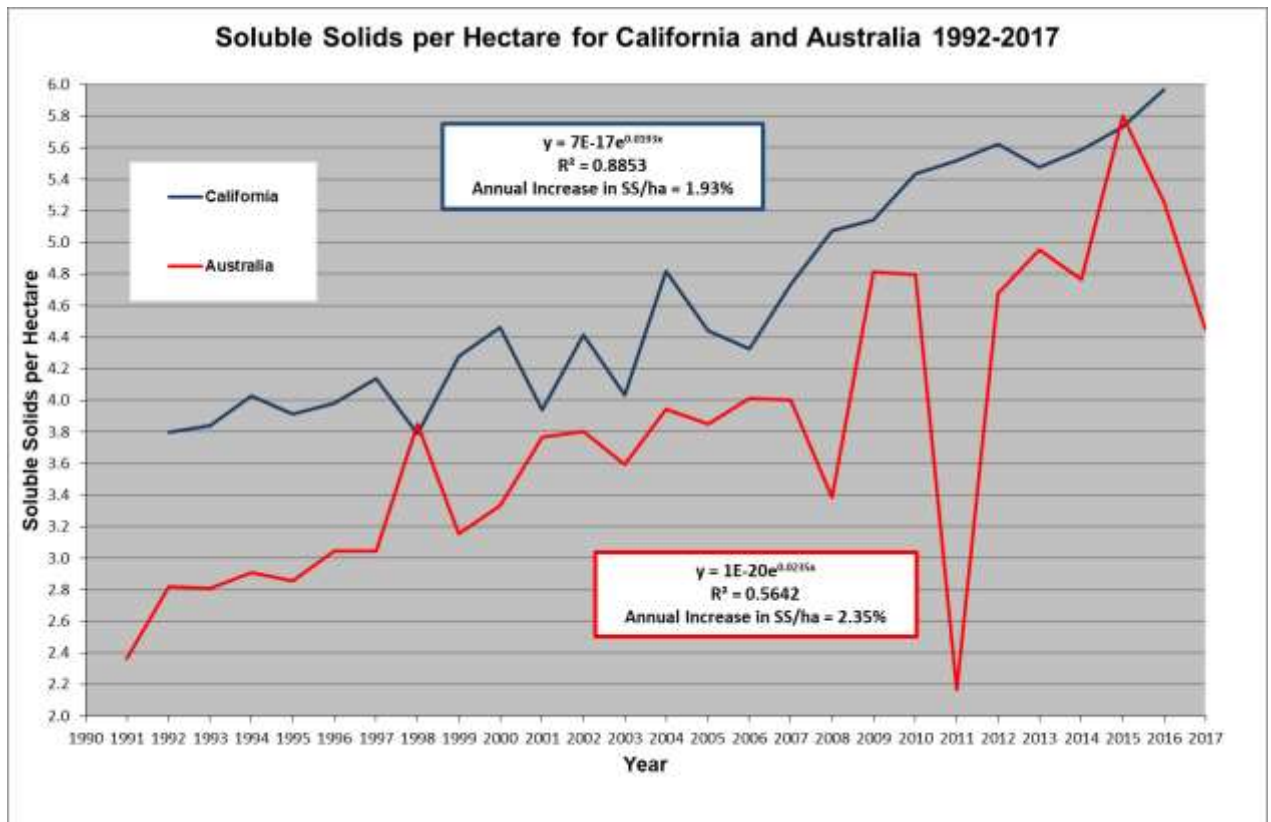
The graphs below indicate the Australian and Californian yield as both tonnes/hectare and solids/hectare. The Australian tonnes/hectare had been increasing at a rate of 1.77% per year, and the soluble solids/hectare at 3.04%.

The Australian figure for 2017, based on hectares harvested was 89.2 tonnes/hectare at 4.99° Brix. A total of 112 hectares were not harvested this season due to rain and high mould counts and were excluded from the average yield calculation for Australia.





Graph 3.0. Australian and Californian Field Yields as Tonnes/Hectare



Graph 3.1. Australian and Californian Tonnes of SS/ha

## **4.0 World Situation and Outlook**

### **4.1 Global Production**

*This data is updated by WPTC.*

2016 global processing production totalled approximately 38,072 million tonnes, down from 41,384 million tonnes in 2015.

Australia contributed only 0.72% to this total, compared to 1.35% of the world total in 2000. Australia's industry is the 17<sup>th</sup> largest in the world and the 3<sup>rd</sup> largest with a January-June harvest.

Country	Tonnes * 1,000				% Change 2016-17	Ranking 2016	% of Total In 2016
	Season	2015	2016	forecast 2017			
USA	July-Dec	13,375	11,946	11,150	-7%	1	31.38%
Italy	July-Dec	5,393	5,180	4,900	-5%	2	13.61%
China	July-Dec	5,600	5,150	5,500	7%	3	13.53%
Spain	July-Dec	3,028	2,950	3,200	8%	4	7.75%
Turkey	July-Dec	2,700	2,100	2,000	-5%	5	5.52%
Portugal	July-Dec	1,660	1,507	1,550	3%	6	3.96%
Brazil	July-Dec	1,300	1,450	1,400	-3%	7	3.81%
Iran	July-Dec	1,350	1,150	1,500	30%	8	3.02%
Chile	Jan-June	850	800	1,080	35%	9	2.10%
Tunisia	July-Dec	935	650	570	-12%	10	1.71%
Ukraine	July-Dec	550	550	650	18%	11	1.44%
Algeria	July-Dec	500	550	500	-9%	12	1.44%
Canada	July-Dec	386	456	420	-8%	13	1.20%
Greece	July-Dec	500	440	410	-7%	14	1.16%
Argentina	Jan-June	535	405	488	20%	15	1.06%
Egypt	July-Dec	250	350	300	-14%	16	0.92%
<b>Australia</b>	<b>Jan-June</b>	<b>286</b>	<b>275</b>	<b>185</b>	<b>-33%</b>	<b>17</b>	<b>0.72%</b>
Thailand	Jan-June	260	260	260	0%	18	0.68%
Poland	July-Dec	210	220	180	-18%	19	0.58%
Dominican Republic	July-Dec	210	210	220	5%	20	0.55%
Israel	July-Dec	220	200	200	0%	21	0.53%
France	July-Dec	170	183	190	4%	22	0.48%
South Africa	Jan-June	140	145	160	10%	23	0.38%
Russia	July-Dec	90	145	250	72%	24	0.38%
Morocco	July-Dec	130	130	130	0%	25	0.34%
India	Jan-June	130	130	130	0%	26	0.34%
Hungary	July-Dec	105	105	100	-5%	27	0.28%
Peru	Jan-June	112	100	110	10%	28	0.26%
Syria	July-Dec	70	70	70	0%	29	0.18%
New Zealand	Jan-June	51	51	50	-2%	30	0.13%
Bulgaria	July-Dec	60	40	50	25%	31	0.11%
Mexico	Jan-June	40	40	40	0%	32	0.11%
Japan	July-Dec	35	33	31	-6%	33	0.09%
Senegal	Jan-June	80	28	80	186%	34	0.07%
Czech Republic	July-Dec	25	25	25	0%	35	0.07%
Venezuela	Jan-June	20	20	20	0%	36	0.05%
Slovakia	July-Dec	20	20	20	0%	37	0.05%
Malta	July-Dec	8	8	8	0%	38	0.02%
<b>Total</b>		<b>41,384</b>	<b>38,072</b>	<b>38,127</b>			<b>100.00%</b>

**Table 4.1.a. World Processing by Country**

Source: - "WPTC" (21 July 2017)