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# Apple and Pear Crop Estimate 2020

Prepared for and confidential to:  
Apple and Pear Levy Payers  
Hort Innovation Apple and Pear Fund

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January 2020

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The **gross apple production for the 2020 harvest is expected to be 255,597 tonnes** (-11.4% from 2019, -4.8% from 2018) with an average national class 1 packout of 71% (67% in 2019). The change in production volume is primarily attributable to a reduced Granny Smith, Pink Lady and Gala crop in most growing regions (Table 1) which is generally seen as a response to a very hot and dry 2018/19 season. This is further impacted by reduced average fruit size across most apple varieties for the 2020 forecast relative to the 2019 harvest. The impact of bushfires in Batlow (NSW), Lenswood (SA) and Bilpin (NSW) has also impacted national production volumes. Hail has significantly affected the West Australian crop and is expected to reduce packouts for this area. Extreme drought conditions in northern NSW and Queensland are likely to see reduced volumes from these two areas.

**Gross pear production for the 2020 harvest is expected to be 93,175 tonnes** (-0.6% from 2019, -11.0% from 2018) with an average national class 1 packout of 56% (62% in 2019). The Packham's Triumph crop is expected to be slightly lower than the 2019 crop (-2.3%) with a slight reduction in WBC expected (-4.9%) primarily attributed to lighter croploads which will likely see a slight increase in average fruit size. Beurre Bosc and Corella are both expected to have increased production with good fruitset and sizing to date.

The **total planted area in 2020 is estimated to be 12,640 hectares** (9,625 apples, 3,015 pears). This represents a slight increase in apple area across the nation but does not take potential losses related to the effect of bushfires over the December/January period in NSW and SA. New plantings are predominately managed/club varieties with continual replacement of traditional Gala and Pink Lady with high-colour strains.

Both the 2020 and revised 2019 crop estimates are determined through application of a relative change from the 2018 crop (ABS Agricultural Commodities Survey 2018). This change is based on information supplied by a grower panel, comprising ~20% of total planted area, and the expert opinion of numerous other industry stakeholders.

**Table 1** Estimated national gross production by variety (kg)

Gross (kg)	2017	2018	2019	2020F	Change (2019 to 2020)
Gala	71,826,424	72,165,334	69,055,993	65,867,892	-4.6%
Pink Lady	104,732,852	104,749,470	98,841,623	86,589,414	-12.4%
Granny Smith	52,027,148	40,675,278	50,132,520	39,959,456	-20.3%
Red Delicious	16,556,734	14,531,177	13,011,137	10,422,260	-19.9%
Fuji	23,338,602	22,610,520	20,141,197	16,372,964	-18.7%
Sundowner	14,841,063	4,882,010	4,239,756	3,146,691	-25.8%
Golden Delicious	8,623,569	5,990,024	6,440,602	5,475,285	-15.0%
Other Apple (inc. clubs)	21,756,400	26,758,288	26,679,593	27,762,602	4.1%
<b>Total Apple</b>	<b>313,702,791</b>	<b>292,362,100</b>	<b>288,542,422</b>	<b>255,596,563</b>	<b>-11.4%</b>
Packham	46,117,975	49,188,112	46,550,827	45,483,599	-2.3%
WBC	34,332,942	33,163,453	32,537,549	30,934,694	-4.9%
Pears Other	17,138,262	22,212,356	14,672,978	16,757,361	14.2%
<b>Total Pear</b>	<b>97,589,180</b>	<b>104,563,921</b>	<b>93,761,354</b>	<b>93,175,654</b>	<b>-0.6%</b>
<b>Total Pomefruit</b>	<b>411,291,971</b>	<b>396,926,021</b>	<b>382,303,776</b>	<b>348,772,217</b>	<b>-8.8%</b>

**Table 2** Estimated average national packout (class 1) by variety. Pear packouts are based on packed fruit (less direct processing and canning)

CLASS 1 PACKOUT	2017	2018	2019	2020F
Gala	73%	69%	66%	71%
Pink Lady	74%	70%	70%	76%
Granny Smith	64%	60%	64%	65%
Red Delicious	77%	72%	70%	70%
Fuji	63%	65%	61%	65%
Sundowner	68%	62%	64%	70%
Golden Delicious	78%	66%	68%	71%
Other Apple (inc. clubs)	75%	71%	68%	71%
<b>Total Apple</b>	<b>71%</b>	<b>68%</b>	<b>67%</b>	<b>71%</b>
Packham	59%	60%	63%	56%
WBC	69%	60%	60%	52%
Pears Other	68%	63%	64%	60%
<b>Total Pear</b>	<b>63%</b>	<b>61%</b>	<b>62%</b>	<b>56%</b>

Note: Assumes 20,500 tonnes of pears harvested in 2020 are sent direct for processing with this proportion excluded from the packout percentage

## 2.0 INTRODUCTION

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This is the fifth Australian Apple and Pear Crop Estimate report prepared by AgFirst. The crop estimate aims to establish the gross and class 1 volume of the current crop by variety and state. A strategic levy investment, the project “Apple and Pear Crop Estimate (AP16002)” is part of the Hort Innovation Apple and Pear Fund.

An accurate crop estimate provides valuable information to stakeholders across the apple and pear industries including:

- Growers
- Marketers
- Exporters and shipping companies
- Packhouses
- Importers
- Packaging manufacturers
- Chemical suppliers
- Government and industry bodies

The 2019 crop estimate has been adjusted as part of this process to reflect data from the grower panel relative to their actual picked volumes and marketed crops since the 2019 crop estimate was produced.

### Acknowledgements

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AgFirst would like to thank the below for their assistance in the generation 2018 crop estimate:

- The numerous growers and groups who provided their data for use in this project.
- Other industry personnel who provided data for and critique of the crop estimate
- Michael Crisera, Susie Green, Matt McMahon, Susie Murphy-White, Stephen Tancred and Marcel Veens for their support in data collection and providing region-specific commentary.

The crop estimate methodology employed by AgFirst is based on a percentage change in gross production between successive seasons. The degree of change is estimated through the collection of grower data for the current and previous two seasons. Class 1 packout is determined through analysis of grower data and consultation with industry expert personnel.

### Data collection

Grower surveys were undertaken throughout December in all growing regions (except for SA in the current estimate – see methodology below) via survey forms requesting actual data for 2018, 2019 and estimated 2020 gross production, packout, fruit size (grams), and planted area by variety. In addition to grower surveys, the use of data sourced from several managed variety (club) programs has been utilised for analysis of ‘other apple’ growth.

### Analysis

Each region’s data was pooled and normalised (adjustment of extreme values) to generate a consensus change between years for each variety. After establishing a 2018 and 2019 baseline production for each region and variety, estimated 2020 production was evaluated.

The proportional changes determined in this analysis were then successively applied between seasons to produce the 2020 estimate figures. Fruit size data was analysed in conjunction with AgFirst’s OrchardNet database to determine relative change in fruit size between years.

### Planted area

Grower and stakeholder interviews were used to make minimal adjustments to national planted area in 2020. The lack of a national planted area dataset remains a challenge to the crop estimation process.

The grower panel utilised for the 2020 Apple and Pear Crop estimate represents 3,075ha of orchard; approximately 20% of the estimated total planted area for apples and pears (Table 3).

**Table 3** Planted area represented by the grower dataset (planted area 2020 harvest season)

Planted Area (ha)	VIC	NSW	SA	WA	QLD	TAS	Grand Total
Panel Area	1,264	360	382	89	550	133	2,478
Estimated total area	7,100	1,250	1,160	1,050	1,000	1,080	12,640
Panel area (%)	18%	29%	33%	8%	55%	12%	20%



#### 4.0 NATIONAL PLANTED AREA AND VARIETY MIX

AgFirst first calculated planted area by variety as part of the 2015 crop estimate process utilising historical ABS data (pre-2010), Goulburn Valley tree census data (Goulburn Valley Orchard Census Committee), and data collected as part of the Pomefruit Industry Data Collection Project. The 2020 total planted area (apples and pears) saw a slight increase in planted area (0.5%). Damage related to bushfire activity in the 2019/20 growing season may have impacted ~200ha which has not been factored into these figures given the survival status of these trees is not known at the time of writing.

Data on planted area per variety varies considerably across the nation and continues to be a significant challenge for crop estimation, variety mix calculation and limits potential for analysis of future growth or decline of pome fruit production. With considerable changes in variety mix for each region of Australia the level of assumption at each subsequent crop estimate continues to grow and increases the potential for errors within the crop estimate.

**Table 4** Estimated planted area by variety for apples and pears. Percentage of area is calculated for the type (apple or pears)

Estimated Area	2017		2018		2019		2020F	
	%	ha	%	%	ha	ha	%	ha
Gala	26%	2,500	27%	2,530	27%	2,550	26%	2,550
Pink Lady	34%	3,200	34%	3,250	34%	3,275	34%	3,290
Granny Smith	13%	1,200	13%	1,220	13%	1,210	13%	1,220
Red Delicious	5%	450	4%	385	4%	385	4%	380
Fuji	8%	800	8%	800	8%	800	8%	790
Sundowner	3%	320	2%	150	1%	135	1%	130
Golden Delicious	2%	175	2%	175	2%	175	2%	175
Other Apple (inc. clubs)	9%	850	10%	950	11%	1,020	11%	1,090
<b>Total Apple</b>		<b>9,495</b>		<b>9,460</b>		<b>9,550</b>		<b>9,625</b>
Packham	41%	1,300	42%	1,300	43%	1,310	43%	1,310
WBC	29%	900	28%	875	25%	755	25%	755
Other Pears	30%	950	30%	920	32%	950	32%	950
<b>Total Pear</b>	<b>25%</b>	<b>3,150</b>	<b>25%</b>	<b>3,095</b>	<b>24%</b>	<b>3,015</b>	<b>24%</b>	<b>3,015</b>
<b>Total Pome</b>		<b>12,645</b>		<b>12,555</b>		<b>12,565</b>		<b>12,640</b>

## 5.0 NATIONAL CROP FORECAST 2020

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### 5.1 Apples

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<b>Apple gross production:</b>	255,596 tonnes	(-11.4% from 2019, -12.6% from 2018)
<b>Class 1 production:</b>	208,025 tonnes	(-6.1% from 2019, -8.3% from 2018)

Gross apple production in 2020 is estimated to be lower than the volume harvested in 2019. The change in production volume is primarily attributable to a reduced Granny Smith, Pink Lady and Gala croploads in most growing regions (Table 1) which is generally seen as a response to a very hot and dry 2018/19 season. The impact of bushfires in Batlow (NSW), Lenswood (SA) and Bilpin (NSW) has also impacted national production volumes.

The class 1 packout estimate corresponds to an average of 71% of the total apple crop being likely to meet class 1 specifications. A breakdown of regional gross and class 1 volumes are presented in Tables 8 and 9.

### 5.2 Pears

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<b>Pear gross production:</b>	93,175 tonnes	(-0.6% from 2019, -10.9% from 2018)
<b>Class 1 packout:</b>	40,804 tonnes	(-10.7% from 2019, -19.9% from 2018)

Gross pear production in 2020 is expected to be lower than the volume harvested in 2019. This reduction in gross volume is predominately driven by reduced WBC and Packham's volumes. The "other pear" category volumes, predominantly Corella and Beurre Bosc, is estimated to be higher in the 2020 harvest relative to 2019.

The class 1 pear packout corresponds to an average of 56% of the pear crop being likely to meet class 1 specifications. This is reduced relative to the 2019 average packout (62%) with the primary cause of reduction being limb and leaf rub related to windy spring conditions in the Goulburn Valley.

A breakdown of regional gross and class 1 volumes are presented in Tables 8 and 9.

**Table 5 National gross production by variety (kg). This is a duplicate of Table 1**

Gross (kg)	2017	2018	2019	2020F	Change (2019 to 2020)
Gala	71,826,424	72,165,334	69,055,993	65,867,892	-4.6%
Pink Lady	104,732,852	104,749,470	98,841,623	86,589,414	-12.4%
Granny Smith	52,027,148	40,675,278	50,132,520	39,959,456	-20.3%
Red Delicious	16,556,734	14,531,177	13,011,137	10,422,260	-19.9%
Fuji	23,338,602	22,610,520	20,141,197	16,372,964	-18.7%
Sundowner	14,841,063	4,882,010	4,239,756	3,146,691	-25.8%
Golden Delicious	8,623,569	5,990,024	6,440,602	5,475,285	-15.0%
Other Apple (inc. clubs)	21,756,400	26,758,288	26,679,593	27,762,602	4.1%
<b>Total Apple</b>	<b>313,702,791</b>	<b>292,362,100</b>	<b>288,542,422</b>	<b>255,596,563</b>	<b>-11.4%</b>
Packham	46,117,975	49,188,112	46,550,827	45,483,599	-2.3%
WBC	34,332,942	33,163,453	32,537,549	30,934,694	-4.9%
Pears Other	17,138,262	22,212,356	14,672,978	16,757,361	14.2%
<b>Total Pear</b>	<b>97,589,180</b>	<b>104,563,921</b>	<b>93,761,354</b>	<b>93,175,654</b>	<b>-0.6%</b>
<b>Total Pomefruit</b>	<b>411,291,971</b>	<b>396,926,021</b>	<b>382,303,776</b>	<b>348,772,217</b>	<b>-8.8%</b>

**Table 6 National class 1 production by variety**

Class 1 (kg)	2017	2018	2019	2020F	Change (2019 to 2020)
Gala	52,402,195	49,715,266	45,794,344	46,899,297	2.4%
Pink Lady	77,774,230	73,457,012	69,506,853	65,575,547	-5.7%
Granny Smith	33,527,544	24,269,171	32,066,677	25,870,292	-19.3%
Red Delicious	12,701,116	10,430,514	9,093,840	7,248,958	-20.3%
Fuji	14,668,107	14,762,359	12,302,095	10,695,008	-13.1%
Sundowner	10,026,972	3,042,861	2,715,776	2,200,948	-19.0%
Golden Delicious	6,712,608	3,930,178	4,383,308	3,868,694	-11.7%
Other Apple (inc. clubs)	16,264,979	18,927,506	18,102,509	19,777,882	9.3%
<b>Total Apple</b>	<b>224,077,751</b>	<b>198,534,867</b>	<b>193,965,402</b>	<b>182,136,625</b>	<b>-6.1%</b>
Packham	26,523,697	28,741,711	28,522,687	25,092,060	-12.0%
WBC	10,593,374	8,538,132	9,325,174	7,216,312	-22.6%
Pears Other	11,350,253	13,687,875	7,842,691	8,496,498	8.3%
<b>Total Pear</b>	<b>48,467,324</b>	<b>50,967,717</b>	<b>45,690,552</b>	<b>40,804,869</b>	<b>-10.7%</b>
<b>Total Pome</b>	<b>272,545,075</b>	<b>249,502,584</b>	<b>239,655,953</b>	<b>222,941,495</b>	<b>-7.0%</b>

Note: Assumes 20,500 tonnes of pears harvested in 2020 are sent direct for processing

**Table 7** National average class 1 packout estimates (%). This is a duplicate of Table 2.

CLASS 1 PACKOUT	2017	2018	2019	2020F
Gala	73%	69%	66%	71%
Pink Lady	74%	70%	70%	76%
Granny Smith	64%	60%	64%	65%
Red Delicious	77%	72%	70%	70%
Fuji	63%	65%	61%	65%
Sundowner	68%	62%	64%	70%
Golden Delicious	78%	66%	68%	71%
Other Apple (inc. clubs)	75%	71%	68%	71%
<b>Total Apple</b>	<b>71%</b>	<b>68%</b>	<b>67%</b>	<b>71%</b>
Packham	59%	60%	63%	56%
WBC	69%	60%	60%	52%
Pears Other	68%	63%	64%	60%
<b>Total Pear</b>	<b>63%</b>	<b>61%</b>	<b>62%</b>	<b>56%</b>

Note: Assumes 20,500 tonnes of pears harvested in 2020 are sent direct for processing with this proportion excluded from the packout percentage

**Table 8** Regional 2020 forecast gross production by variety (kg)

Gross (kg)	Total	VIC	NSW	SA	WA	QLD	TAS
Gala	65,867,892	28,048,851	8,553,914	6,192,289	6,131,716	5,585,198	11,355,923
Pink Lady	86,589,414	48,357,927	8,797,172	9,396,769	7,821,968	7,901,855	4,313,723
Granny Smith	39,959,456	25,196,796	2,607,192	3,361,527	3,731,774	4,282,974	779,193
Red Delicious	10,422,260	2,114,730	2,636,674	351,599	803,380	3,520,253	995,624
Fuji	16,372,964	4,067,730	1,624,688	2,612,221	3,386,275	876,270	3,805,780
Sundowner	3,146,691	685,700	399,496	118,377	319,928	658,530	964,660
Golden Delicious	5,475,285	2,984,080	-	271,239	207,150	-	2,012,816
Other Apple (inc. clubs)	27,762,602	8,182,402	2,893,557	4,282,578	2,921,617	2,853,686	6,628,762
<b>Total Apple</b>	<b>255,596,563</b>	<b>119,638,216</b>	<b>27,512,693</b>	<b>26,586,598</b>	<b>25,323,809</b>	<b>25,678,766</b>	<b>30,856,482</b>
Packham	45,483,599	39,520,055	90,448	3,567,054	1,726,362	138,784	440,897
WBC	30,934,694	29,135,011	81,403	1,088,254	549,297	15,411	65,318
Other Pears	16,757,361	13,232,419	29,848	1,451,005	1,647,891	89,040	307,158
<b>Total Pear</b>	<b>93,175,654</b>	<b>81,887,485</b>	<b>201,699</b>	<b>6,106,312</b>	<b>3,923,549</b>	<b>243,235</b>	<b>813,373</b>
<b>Total Pome</b>	<b>348,772,217</b>	<b>201,525,701</b>	<b>27,714,392</b>	<b>32,692,910</b>	<b>29,247,358</b>	<b>25,922,001</b>	<b>31,669,855</b>

**Table 9** Regional 2020 forecast class 1 production by variety (kg)

Class 1 (kg)	Total	VIC	NSW	SA	WA	QLD	TAS
Gala	46,899,297	20,756,149	5,388,966	4,520,371	3,801,664	3,574,527	8,857,620
Pink Lady	65,575,547	37,235,604	6,333,964	7,235,512	5,084,279	6,321,484	3,364,704
Granny Smith	25,870,292	16,377,917	1,798,962	2,184,992	1,828,569	3,040,912	638,939
Red Delicious	7,248,958	1,480,311	1,845,671	246,119	465,960	2,464,177	746,718
Fuji	10,695,008	2,644,025	1,039,800	1,645,699	1,862,451	534,525	2,968,508
Sundowner	2,200,948	466,276	247,688	76,945	207,953	526,824	675,262
Golden Delicious	3,868,694	2,029,174	-	176,305	93,217	-	1,569,997
Other Apple (inc. clubs)	19,777,882	6,054,978	2,083,361	3,083,456	1,899,051	2,083,191	4,573,845
<b>Total Apple</b>	<b>182,136,625</b>	<b>87,044,435</b>	<b>18,738,413</b>	<b>19,169,400</b>	<b>15,243,146</b>	<b>18,545,639</b>	<b>23,395,593</b>
Packham	25,092,060	21,571,231	54,269	2,247,244	863,181	91,598	264,538
WBC	7,216,312	6,188,856	48,842	652,952	274,648	9,863	41,150
Other Pears	8,496,498	6,439,451	17,909	957,663	823,945	57,876	199,653
<b>Total Pear</b>	<b>40,804,869</b>	<b>34,199,538</b>	<b>121,020</b>	<b>3,857,859</b>	<b>1,961,774</b>	<b>159,337</b>	<b>505,341</b>
<b>Total Pome</b>	<b>222,941,495</b>	<b>121,243,972</b>	<b>18,859,432</b>	<b>23,027,259</b>	<b>17,204,921</b>	<b>18,704,975</b>	<b>23,900,935</b>

Note: Assumes 20,500 tonnes of pears grown in Victoria are sent direct for processing

## 6.0 REGIONAL SUMMARIES 2020

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The below are regional summaries for each region capturing weather conditions and other pertinent information. A varietal breakdown of gross volumes by region is presented in Appendix 1.

### 6.1 Victoria (Northern)

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Pink Lady and Gala varietals are expected to be down across the region with most growers expecting a reduced crop at the 2020 harvest. This reduction is generally attributed to the high 2019 croploads coupled with the hot, dry summer conditions encountered. Fruitset is variable between and across blocks with a reduction expected for both varieties even after accounting for increased volumes from younger blocks.

Granny Smith is on average in the “off-year” with reduced croploads expected across the region with slightly less fruit expected than the standard “off-year” (i.e. 2016, 2018 harvests).

Pear production is expected to increase relative to 2019 with a good Packham’s crop (similar to last year), a slightly reduced WBC crop and Bosc at a higher volume (similar to 2018). Whilst increased volumes are expected, pears have been badly affected by limb rub across the region with reduced WBC and Packham’s class 1 volumes expected as a result. Direct processing intakes are expected to be similar to 2019.

Hail has been recorded in pockets of the region, particularly around Shepparton East, but is reported to result in hail damage levels similar to most years. Some additional hail has been observed in pockets of orchard to the west of town as well.

Full bloom dates are running approximately 3 days later than the last 2 years and given a relatively mild early development conditions harvest dates to be 3-5 days later than last year.

### 6.2 Victoria (Southern)

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Southern Victoria has had good spring/early summer rainfall to date which has taken considerable pressure off irrigation requirements and has resulted in high vigour in some blocks. Total volume is likely to be maintained with several redevelopment plantings entering production despite some patchy blocks in Pink Lady varietals and Granny Smith particularly.

Light hail has affected some growers but is expected to have minimal impacts with a large proportion of most grower’s areas netted and this being able to be hand-thinned out in most cases.

The bloom period was noticeably elongated this season and running, on average, 4 days later than last year. Coupled with relatively cool spring conditions harvest is expected to be 5-6 days later than last year.

### 6.3 New South Wales (Batlow)

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On the 4<sup>th</sup> of January 2020 the Batlow region suffered losses in relation to the Dunn's Road fire with apple orchards and infrastructure suffering varying degrees of damage. Initial analysis of satellite imagery suggests approximately 180ha of fruit trees (~20% of the region) are affected and this is accounted for in 2020 estimate figures; more detailed loss assessments will be undertaken beginning the week of 27<sup>th</sup> January 2020.

The below is a pre-fire seasonal summary and intended as an overview of earlier in the season.

Red Delicious and Fuji volumes are expected to be down from the region with a number of blocks carrying very light croploads. Like other regions, the hot 2019 summer has exacerbated biennial bearing tendencies particularly where crops were carrying heavier loads last season resulting in a relatively "patchy" fruitset.

Younger blocks continue to enter production across the region and fruit volumes are expected to rise over the coming years as this increases. Volumes associated with these blocks are likely to see 2020 harvest volumes remain largely consistent with the 2019 season.

This year's full bloom dates are running approximately 4-5 days earlier than last year but are expected to be harvested only slightly earlier with a relatively cool spring.

### 6.4 New South Wales (Orange and Bilpin)

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On the 19<sup>th</sup> of December 2019 the Bilpin region suffered bushfire related damage to orchards and infrastructure suffering varying degrees of damage. Initial analysis of satellite imagery suggests approximately 10ha of fruit trees have been damaged.

Orange is currently experiencing drought conditions with fruit size and yields likely to be reduced as a result of water deficit. Several young blocks will continue to increase in production but older tree fruitset has been variable depending on cropload and stress status in the 2019 harvest season. Fruitset on one-year-old wood was relatively poor which is most likely related to hot temperatures influencing the flowering characteristics of this wood.

This year's full bloom dates are running approximately 4 days earlier than those observed for the 2019 season and harvest dates are likely to reflect this.

### 6.5 Queensland

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Stanthorpe is currently in severe drought with fruit size likely to be challenged as a direct result. Early fruit growth and fruitset were relatively strong but this has slowed as warmer temperatures have developed. Deficit irrigation is the reality for many growers across the region and tree stress has begun to show symptoms in a number of areas. As a result of these factors, fruit volumes from the region are expected to be significantly down.

A rain event in mid-January saw ~100mm of rainfall across most of the region which is likely to see some fruit size increase in varieties harvested later in the season and reduce the likelihood of tree deaths related to the harsh conditions.

This year's full bloom dates were, on average, 4 days earlier than last year and harvest timing is expected to reflect this.

## 6.6 South Australia

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On the 20<sup>th</sup> of December 2019 fire passed through the Adelaide Hills region with apple orchards and infrastructure suffering varying degrees of damage. Initial assessments in the region identify approximately 25ha of apple trees (~3% of the region) have been damaged.

Pink Lady and Gala varieties are expected to be reduced across the region with most growers estimating a reduced crop for the 2020 harvest. Other varieties have also been affected by relatively poor return bloom with patchy blocks reported across the region. Growers tend to report earlier flowering varieties being more affected than those later in the blossom window. With a relatively dry winter and spring period, water supplies are low across the region and will continue to be a challenge leading into harvest.

This year's full bloom dates were 3-5 days later than the 2019 season and harvest dates are expected to reflect this.

## 6.7 Western Australia

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Hail damage is reported to have affected a significant portion of the West Australian crop following a storm on October 31<sup>st</sup>. The worst damage was observed to the west of Manjimup with minor damage observed in a large area near Donnybrook. Damage levels are estimated at 30% by several growers. Pears are reported to have suffered a relatively high proportion of damage being in a very sensitive growth stage at the time of the stormfront.

Rainfall is down across all growing regions and available water supplies vary depending on the growing region. Water supplies are reported to be lowest around the Donnybrook area.

Winter chill was relatively good in all West Australian growing regions and full bloom dates were approximately 10 days earlier than last year and harvest dates are expected to reflect this.

## 6.8 Tasmania

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Winter and spring have been relatively dry across Tasmania and the crop is developing well to date. Much like the rest of the country, blocks that carried heavier croploads in 2019 and were heat/water stressed have returned with a patchy fruitset, however, this is expected to be more than offset by other varieties being "on" (e.g. Fuji varieties) and new blocks entering full production. Gala was noted by a number of growers as being very clean, however, fruitset was somewhat variable. Chemical thinning conditions were challenging this season and growers have subsequently had an extensive hand-thinning job.

This year's full bloom dates were similar to the 2019 season in Southern Tasmania whilst in the north full bloom dates are reported to be 1-2 days earlier than last year. Cold spring conditions are expected to have slightly delayed fruit development and harvest dates similar to last year are expected.



Fruit size is expected to be reduced in most apple varieties and slightly higher in most pear varieties. Data on fruit size participation was relatively low in the grower survey form (n = 178 across all varieties) and was subsequently analysed alongside OrchardNet fruit size monitoring data (Table 10). 314 blocks were analysed as part of the OrchardNet fruit sizing dataset.

The outputs of OrchardNet's fruit size monitoring and estimated effect on fruit/count size profiles are presented in Figures 1-6 for Gala, Pink Lady and Granny Smith. Size profile comparisons represent the average fruit weight fitted to standard size distribution curves.

It is apparent from these datasets that the apple fruit size profile is likely to be significantly lower than the last two years and adjustments to marketing plans may be necessary to match these volumes.

**Table 10** Fruit size data (grams) for 2018, 2019 and 2020 estimate. These numbers represent grower supplied data (project) and a forecast derived from OrchardNet's fruit size monitoring database

Fruit size (g)	Grower panel average fruit size		OrchardNet growth curve derived (as % relative difference to 2019)
	2018	2019	2020F
Gala	165	162	155 (-4.3%)
Pink Lady	168	163	159 (-2.4%)
Granny Smith	167	167	159 (-4.7%)
Red Delicious	176	171	159 (-7.1%)
Fuji	188	180	170 (-5.6%)
Sundowner	165	150	-
Golden Delicious	167	170	-
Packham	180	182	186 (+2.1%)
WBC	188	190	192 (+0.1%)
Other Pears	182	188	-

## Fruit Size Report Type - Royal Gala Diameter (mm)

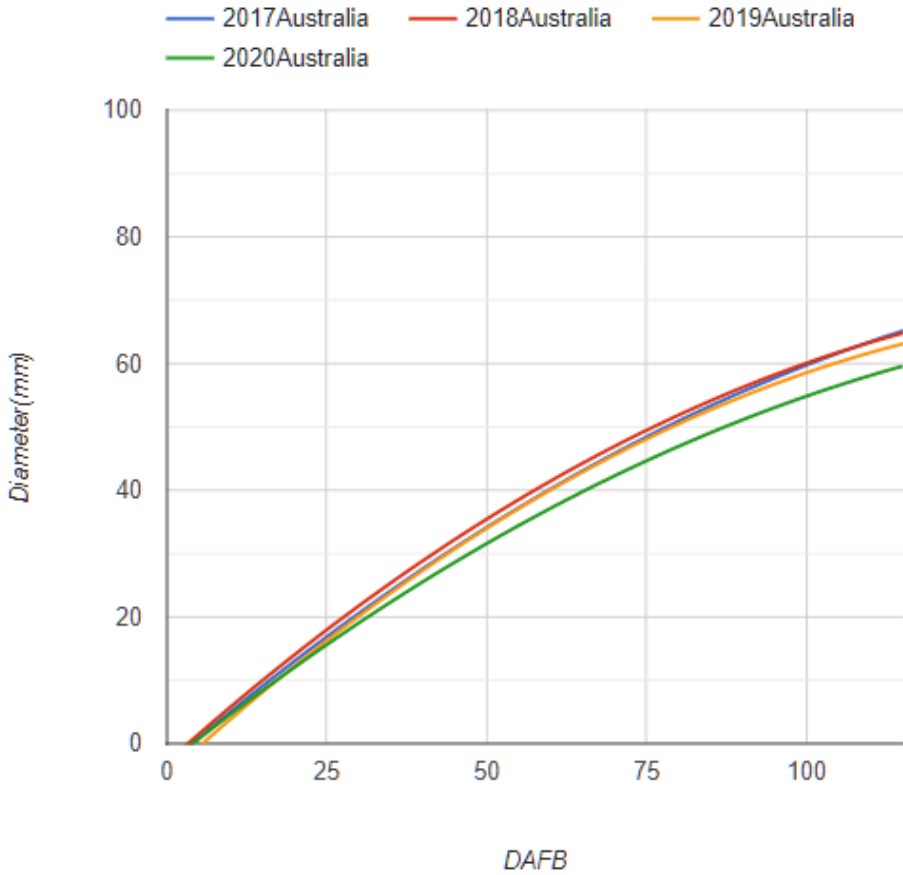


Figure 1 Fruit diameter (mm) for Gala blocks entered into the OrchardNet database.

### Royal Gala Estimated Class 1 Size Profile Comparison 2018-2020F

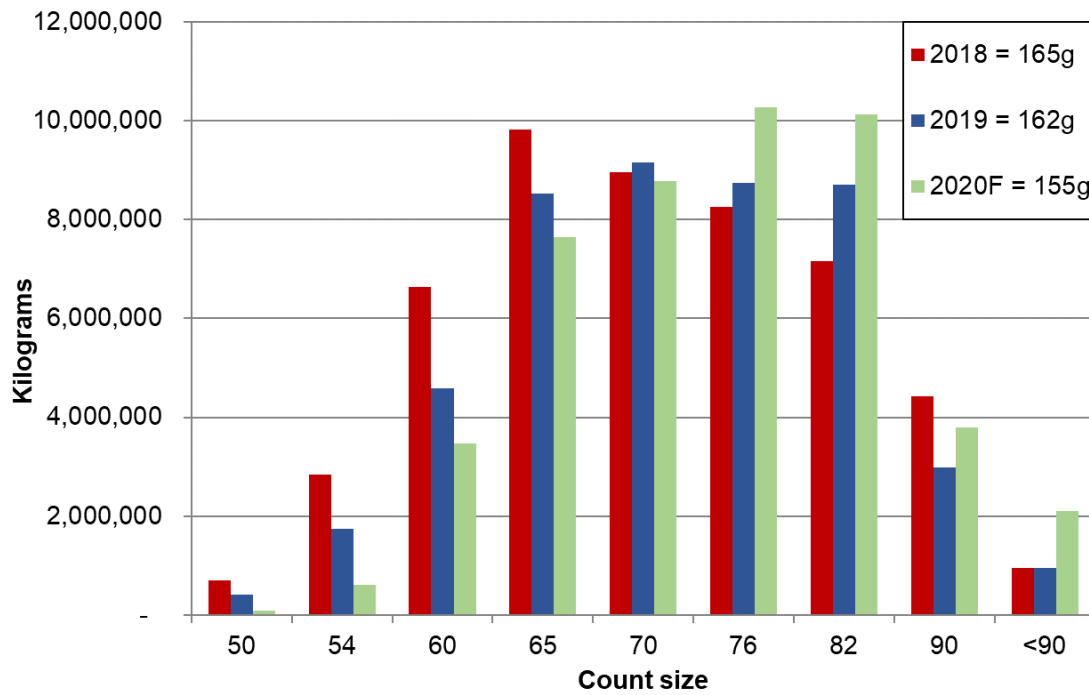


Figure 2 Estimated size profile by count (12kg sale weight) for Royal Gala 2018-2020F

## Fruit Size Report Type - Pink Lady Diameter (mm)

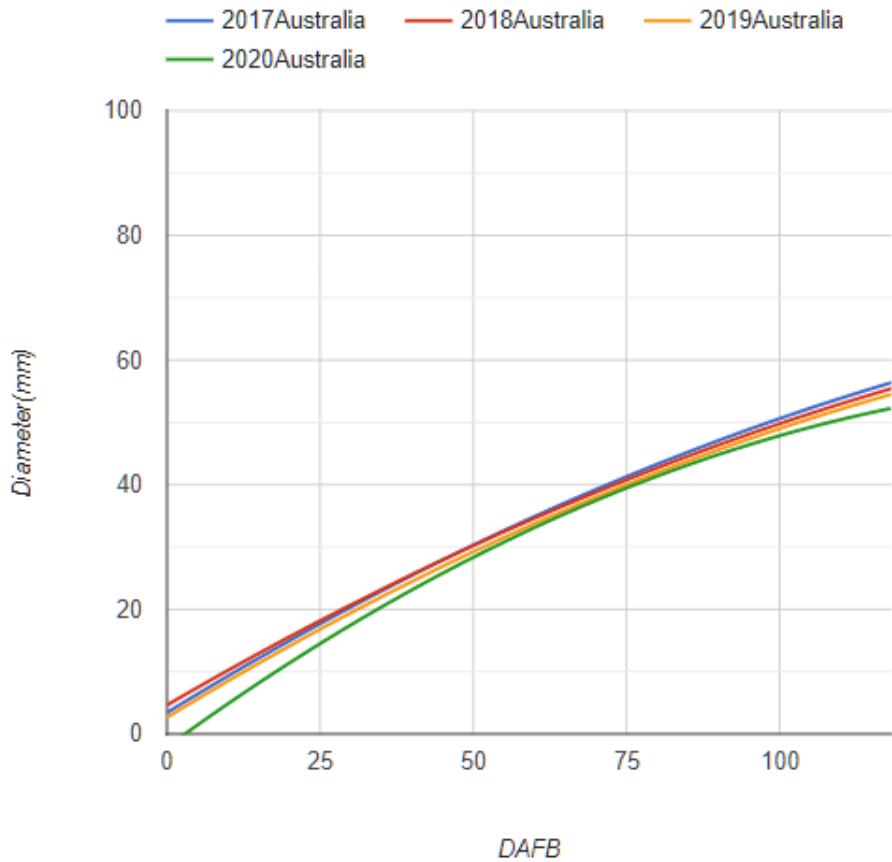


Figure 3 Fruit diameter (mm) for Pink Lady blocks entered into the OrchardNet database.

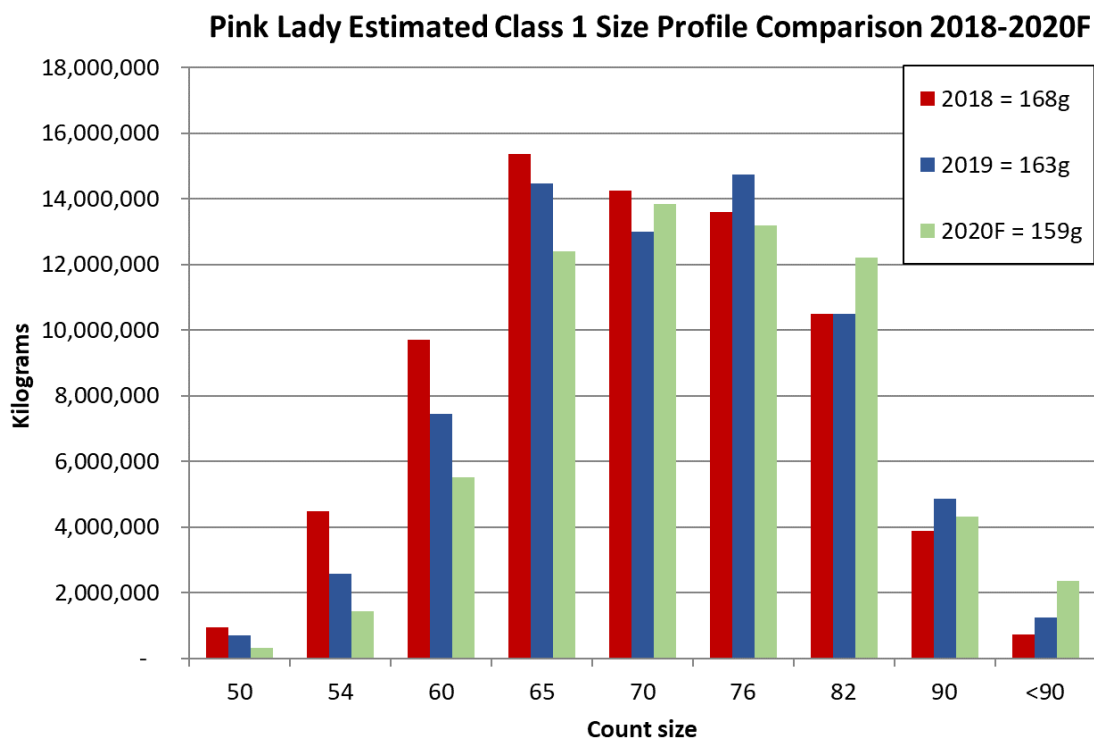


Figure 4 Estimated size profile by count (12kg sale weight) for Pink Lady 2018-2020F

## Fruit Size Report Type - Granny Smith Diameter (mm)

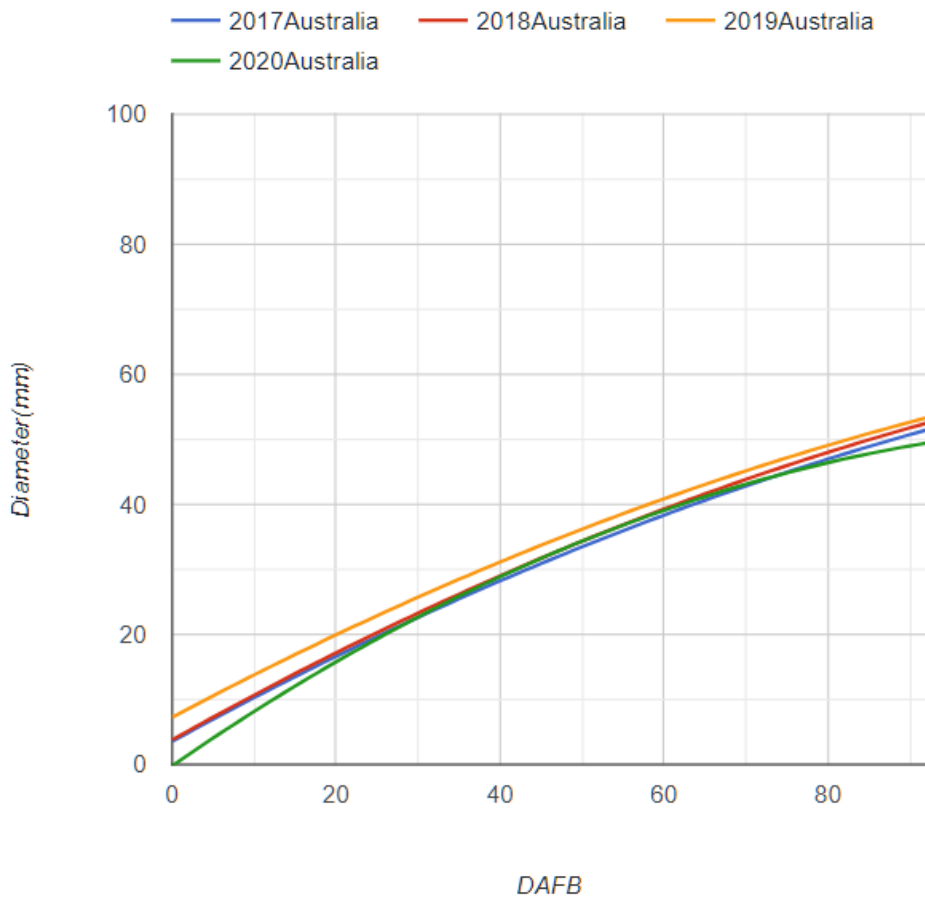


Figure 5 Fruit diameter (mm) for Granny Smith blocks entered into the OrchardNet database.

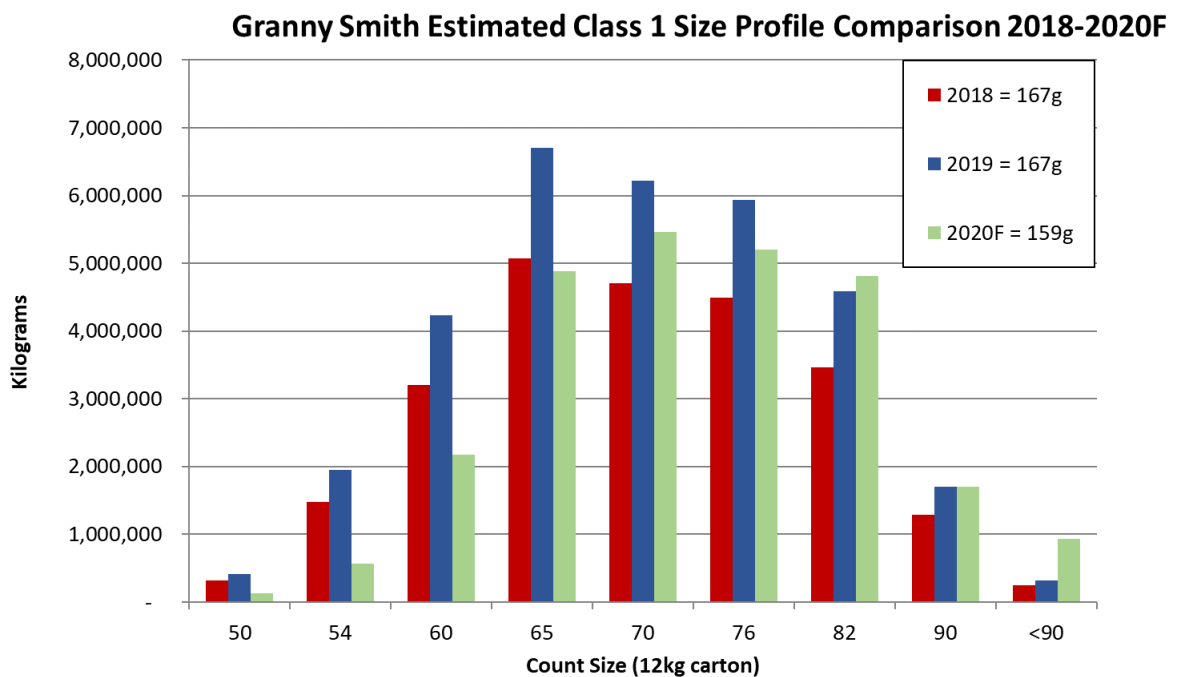


Figure 6 Estimated size profile by count (12kg sale weight) for Granny Smith 2018-2020F

APPENDIX 1

National and regional breakdowns for major varieties are presented in Tables 11-15.

Table 11 National: gross volumes by variety

NATIONAL		2017		2018		2019		2020F	Change 2019-2020	Change 2018-2020
<b>Estimated Gross Volume (kg)</b>										
Royal Gala	23%	71,826,424	20%	64,042,269	24%	69,055,993	26%	65,867,892	-4.6%	2.9%
Pink Lady	33%	104,732,852	31%	96,670,378	34%	98,841,623	34%	86,589,414	-12.4%	-10.4%
Granny Smith	17%	52,027,148	13%	39,466,652	17%	50,132,520	16%	39,959,456	-20.3%	1.2%
Red Delicious	5%	16,556,734	4%	13,294,418	5%	13,011,137	4%	10,422,260	-19.9%	-21.6%
Fuji	7%	23,338,602	6%	19,339,252	7%	20,141,197	6%	16,372,964	-18.7%	-15.3%
Sundowner	5%	14,841,063	2%	5,794,969	1%	4,239,756	1%	3,146,691	-25.8%	-45.7%
Golden Delicious	3%	8,623,569	2%	6,661,016	2%	6,440,602	2%	5,475,285	-15.0%	-17.8%
Other Apple (Inc. clubs)	7%	21,756,400	7%	23,085,694	9%	26,679,593	11%	27,762,602	4.1%	20.3%
<b>Total Apple</b>		<b>313,702,791</b>		<b>268,354,647</b>		<b>288,542,422</b>		<b>255,596,563</b>	<b>-11.4%</b>	<b>-4.8%</b>
Packham	47%	46,117,975	51%	49,405,431	50%	46,550,827	49%	45,483,599	-2.3%	-7.9%
WBC	35%	34,332,942	38%	36,947,302	35%	32,537,549	33%	30,934,694	-4.9%	-16.3%
Pears Other	18%	17,138,262	19%	18,380,625	16%	14,672,978	18%	16,757,361	14.2%	-8.8%
<b>Total Pear</b>		<b>97,589,180</b>		<b>104,733,357</b>		<b>93,761,354</b>		<b>93,175,654</b>	<b>-0.6%</b>	<b>-11.0%</b>
<b>Total Pome Fruit</b>		<b>411,291,971</b>		<b>373,088,004</b>		<b>382,303,776</b>		<b>348,772,217</b>	<b>-8.8%</b>	<b>-6.5%</b>

Table 12 Victoria: gross volumes by variety

VICTORIA		2017		2018		2019		2020F	Change 2019-2020	Change 2018-2020
<b>Estimated Gross Volume (kg)</b>										
Royal Gala	19%	27,728,496	21%	26,374,443	20%	27,798,663	23%	28,048,851	0.9%	6.3%
Pink Lady	38%	55,456,992	44%	54,632,774	42%	57,637,577	40%	48,357,927	-16.1%	-11.5%
Granny Smith	23%	33,566,074	19%	23,862,591	23%	32,262,223	21%	25,196,796	-21.9%	5.6%
Red Delicious	2%	2,918,789	2%	2,511,852	2%	3,016,734	2%	2,114,730	-29.9%	-15.8%
Fuji	4%	5,983,518	5%	6,279,629	4%	5,482,116	3%	4,067,730	-25.8%	-35.2%
Sundowner	6%	8,172,609	1%	1,255,926	1%	789,977	1%	685,700	-13.2%	-45.4%
Golden Delicious	4%	5,253,820	3%	3,767,778	2%	3,391,000	2%	2,984,080	-12.0%	-20.8%
Other Apple (Inc. clubs)	5%	6,859,154	6%	6,907,592	5%	7,266,787	7%	8,182,402	12.6%	18.5%
<b>Total Apple</b>		<b>145,939,452</b>		<b>125,592,584</b>		<b>137,645,076</b>		<b>119,638,216</b>	<b>-13.1%</b>	<b>-4.7%</b>
Packham	47%	39,843,138	46%	43,446,201	49%	40,491,860	48%	39,520,055	-2.4%	-9.0%
WBC	38%	32,213,601	34%	35,126,716	37%	30,700,750	36%	29,135,011	-5.1%	-17.1%
Pears Other	16%	13,563,621	20%	14,790,196	14%	11,166,598	16%	13,232,419	18.5%	-10.5%
<b>Total Pear</b>		<b>84,772,633</b>		<b>92,438,726</b>		<b>82,359,207</b>		<b>81,887,485</b>	<b>-0.6%</b>	<b>-11.4%</b>
<b>Total Pome Fruit</b>		<b>230,712,086</b>		<b>218,031,310</b>		<b>220,004,284</b>		<b>201,525,701</b>	<b>-8.4%</b>	<b>-7.6%</b>

Table 13 New South Wales: gross volumes by variety

NEW SOUTH WALES		2017		2018		2019		2020F	Change 2019-2020	Change 2018-2020
<b>Estimated Gross Volume (kg)</b>										
Royal Gala	27%	9,419,532	28%	8,307,997	30%	9,969,597	31%	8,553,914	-14.2%	3.0%
Pink Lady	31%	10,815,018	32%	9,494,854	24%	7,975,677	32%	8,797,172	10.3%	-7.3%
Granny Smith	8%	2,790,972	8%	2,373,714	12%	3,845,416	9%	2,607,192	-32.2%	9.8%
Red Delicious	13%	4,535,330	12%	3,560,570	11%	3,524,965	10%	2,636,674	-25.2%	-25.9%
Fuji	10%	3,523,603	8%	2,373,714	12%	4,011,576	6%	1,624,688	-59.5%	-31.6%
Sundowner	4%	1,395,486	2%	593,428	2%	534,086	1%	399,496	-25.2%	-32.7%
Golden Delicious	0%	-	0%	-	0%	-	0%	-	0.0%	#DIV/0!
Other Apple (Inc. clubs)	7%	2,407,214	10%	2,967,142	10%	3,412,213	11%	2,893,557	-15.2%	-2.5%
<b>Total Apple</b>		<b>34,887,156</b>		<b>29,671,419</b>		<b>33,273,529</b>		<b>27,512,693</b>	<b>-17.3%</b>	<b>-7.3%</b>
Packham	45%	45,924	45%	90,675	45%	95,209	45%	90,448	-5.0%	-0.3%
WBC	40%	41,331	40%	81,607	40%	85,688	40%	81,403	-5.0%	-0.2%
Pears Other	15%	15,155	15%	29,923	15%	31,419	15%	29,848	-5.0%	-0.3%
<b>Total Pear</b>		<b>102,410</b>		<b>202,205</b>		<b>212,315</b>		<b>201,699</b>	<b>-5.0%</b>	<b>-0.3%</b>
<b>Total Pome Fruit</b>		<b>34,989,566</b>		<b>29,873,624</b>		<b>33,485,845</b>		<b>27,714,392</b>	<b>-17.2%</b>	<b>-7.2%</b>

Table 14 Queensland: gross volumes by variety

QUEENSLAND		2017		2018		2019		2020F	Change 2019-2020	Change 2018-2020
<b>Estimated Gross Volume (kg)</b>										
Royal Gala	23%	8,033,272	24%	6,743,779	23%	6,811,217	18%	5,585,198	-18.0%	-17.2%
Pink Lady	28%	9,779,635	26%	7,165,265	29%	8,598,318	26%	7,901,855	-8.1%	10.3%
Granny Smith	18%	6,286,909	18%	5,057,834	20%	5,867,088	14%	4,282,974	-27.0%	-15.3%
Red Delicious	17%	5,937,636	16%	4,495,853	14%	4,046,268	11%	3,520,253	-13.0%	-21.7%
Fuji	5%	1,816,218	5%	1,404,954	4%	1,138,013	3%	876,270	-23.0%	-37.6%
Sundowner	3%	873,182	3%	842,972	4%	1,045,286	2%	658,530	-37.0%	-21.9%
Golden Delicious	0%	-	0%	-	0%	-	0%	-	0.0%	0.0%
Other Apple (Inc. clubs)	6%	2,200,418	9%	2,388,422	8%	2,460,074	9%	2,853,686	16.0%	19.5%
<b>Total Apple</b>		<b>34,927,270</b>		<b>28,099,080</b>		<b>29,966,264</b>		<b>25,678,766</b>	<b>-14.3%</b>	<b>-8.6%</b>
Packham	43%	108,264	39%	74,200	52%	123,914	57%	138,784	12.0%	87.0%
WBC	12%	30,933	9%	17,123	7%	17,123	6%	15,411	-10.0%	-10.0%
Pears Other	45%	113,185	52%	98,934	41%	98,934	37%	89,040	-10.0%	-10.0%
<b>Total Pear</b>		<b>252,382</b>		<b>190,257</b>		<b>239,971</b>		<b>243,235</b>	<b>1.4%</b>	<b>27.8%</b>
<b>Total Pome Fruit</b>		<b>35,179,652</b>		<b>28,289,337</b>		<b>30,206,235</b>		<b>25,922,001</b>	<b>-14.2%</b>	<b>-8.4%</b>



Table 15 South Australia: gross volumes by variety. Note: bulk bin sampling was used in 2019 and the varietal shift data is less reliable than in other regions

SOUTH AUSTRALIA		2017		2018		2019		2020F		Change 2019-2020	Change 2018-2020
<b>Estimated Gross Volume (kg)</b>											
Royal Gala	20%	5,521,052	21%	6,059,418	23%	6,738,073	23%	6,192,289	-8.1%	2.2%	
Pink Lady	42%	11,594,209	45%	13,153,372	41%	12,364,170	35%	9,396,769	-24.0%	-28.6%	
Granny Smith	10%	2,760,526	11%	3,251,395	10%	3,095,328	13%	3,361,527	8.6%	3.4%	
Red Delicious	2%	552,105	2%	591,163	2%	506,627	1%	351,599	-30.6%	-40.5%	
Fuji	10%	2,760,526	9%	2,660,233	10%	2,851,769	10%	2,612,221	-8.4%	-1.8%	
Sundowner	6%	1,628,710	3%	886,744	1%	360,905	0%	118,377	-67.2%	-86.7%	
Golden Delicious	4%	993,789	1%	295,581	1%	329,573	1%	271,239	-17.7%	-8.2%	
Other Apple (Inc. clubs)	6%	1,766,737	9%	2,660,233	12%	3,695,063	16%	4,282,578	15.9%	61.0%	
<b>Total Apple</b>		<b>27,605,258</b>		<b>29,558,139</b>		<b>29,941,508</b>		<b>26,586,598</b>	<b>-11.2%</b>	<b>-10.1%</b>	
<b>Packham</b>	58%	3,723,388	59%	3,575,994	58%	3,754,793	58%	3,567,054	-5.0%	-0.2%	
WBC	22%	1,412,319	18%	1,090,981	18%	1,145,530	18%	1,088,254	-5.0%	-0.3%	
Pears Other	20%	1,283,927	24%	1,454,641	24%	1,527,374	24%	1,451,005	-5.0%	-0.2%	
<b>Total Pear</b>		<b>6,419,634</b>		<b>6,061,006</b>		<b>6,427,697</b>		<b>6,106,312</b>	<b>-5.0%</b>	<b>0.7%</b>	
<b>Total Pome Fruit</b>		<b>34,024,892</b>		<b>35,619,145</b>		<b>36,369,205</b>		<b>32,692,910</b>	<b>-10.1%</b>	<b>-8.2%</b>	

Table 16 Western Australia: gross volumes by variety

WESTERN AUSTRALIA		2017		2018		2019		2020F	Change 2019-2020	Change 2018-2020
<b>Estimated Gross Volume (kg)</b>										
Royal Gala	19%	7,145,005	19%	4,944,984	21%	6,393,865	20%	6,131,716	-4.1%	24.0%
Pink Lady	31%	11,639,863	32%	8,055,829	26%	7,814,154	25%	7,821,968	0.1%	-2.9%
Granny Smith	16%	5,819,932	14%	4,027,914	14%	4,132,640	12%	3,731,774	-9.7%	-7.4%
Red Delicious	4%	1,364,046	4%	944,042	3%	868,519	3%	803,380	-7.5%	-14.9%
Fuji	12%	4,403,921	12%	3,047,908	13%	3,745,880	11%	3,386,275	-9.6%	11.1%
Sundowner	4%	1,480,965	4%	1,024,960	1%	437,658	1%	319,928	-26.9%	-68.8%
Golden Delicious	1%	311,782	1%	215,781	1%	207,150	1%	207,150	0.0%	-4.0%
Other Apple (Inc. clubs)	13%	4,910,567	15%	3,398,553	15%	4,367,140	9%	2,921,617	-33.1%	-14.0%
<b>Total Apple</b>		<b>37,076,082</b>		<b>25,659,973</b>		<b>27,967,006</b>		<b>25,323,809</b>	<b>-9.5%</b>	<b>-1.3%</b>
Packham	44.0%	1,634,432	44.0%	1,777,464	44%	1,644,154	44%	1,726,362	5.0%	-2.9%
WBC	14.0%	520,047	14.0%	565,557	14%	523,140	14%	549,297	5.0%	-2.9%
Pears Other	42.0%	1,560,140	42.0%	1,696,670	42%	1,569,420	42%	1,647,891	5.0%	-2.9%
<b>Total Pear</b>		<b>3,714,619</b>		<b>4,039,690</b>		<b>3,736,713</b>		<b>3,923,549</b>	<b>5.0%</b>	<b>-2.9%</b>
<b>Total Pome Fruit</b>		<b>40,790,701</b>		<b>29,699,663</b>		<b>31,703,719</b>		<b>29,247,358</b>	<b>-7.7%</b>	<b>-1.5%</b>

Table 17 Tasmania: gross volumes by variety

TASMANIA		2017		2018		2019		2020F	Change 2019-2020	Change 2018-2020
<b>Estimated Gross Volume (kg)</b>										
Royal Gala	42%	13,979,067	39%	11,611,647	38%	11,344,579	37%	11,355,923	0.1%	-2.2%
Pink Lady	16%	5,447,134	14%	4,168,283	15%	4,451,727	14%	4,313,723	-3.1%	3.5%
Granny Smith	2%	802,736	3%	893,204	3%	929,825	3%	779,193	-16.2%	-12.8%
Red Delicious	4%	1,248,827	4%	1,190,938	4%	1,048,026	3%	995,624	-5.0%	-16.4%
Fuji	15%	4,850,816	12%	3,572,814	10%	2,911,844	12%	3,805,780	30.7%	6.5%
Sundowner	4%	1,290,111	4%	1,190,938	4%	1,071,844	3%	964,660	-10.0%	-19.0%
Golden Delicious	6%	2,064,177	8%	2,381,876	8%	2,512,879	7%	2,012,816	-19.9%	-15.5%
Other Apple (Inc. clubs)	11%	3,612,310	16%	4,763,752	18%	5,478,315	21%	6,628,762	21.0%	39.2%
<b>Total Apple</b>		<b>33,295,178</b>		<b>29,773,453</b>		<b>29,749,039</b>		<b>30,856,482</b>	<b>3.7%</b>	<b>3.6%</b>
Packham	52%	762,830	54%	440,897	56%	440,897	54%	440,897	0.0%	0.0%
WBC	8%	114,711	8%	65,318	8%	65,318	8%	65,318	0.0%	0.0%
Pears Other	41%	602,234	38%	310,261	36%	279,235	38%	307,158	10.0%	-1.0%
<b>Total Pear</b>		<b>1,479,775</b>		<b>816,476</b>		<b>785,450</b>		<b>813,373</b>	<b>3.6%</b>	<b>-0.4%</b>
<b>Total Pome Fruit</b>		<b>34,774,953</b>		<b>30,589,929</b>		<b>30,534,489</b>		<b>31,669,855</b>	<b>3.7%</b>	<b>3.5%</b>

## Contact

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