



## Future Orchards™ ~ Orchard Business Analysis 2017 and Australian Variety Performance

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### Introduction

In this presentation we will review the recently completed Orchard Business Analysis and review variety performance for the average Australian grower.

### Orchard Business Analysis 2017

The objective of the Orchard Business Analysis (OBA) is to determine the productivity and economic performance of the Australian pomefruit industry. AgFirst collect the physical and financial data from a minimum of 24 orchard businesses, located throughout Australia.

This data is then analysed and used to create an industry model. This model captures the current performance of the industry and provides:

- a productive and financial snapshot of the state of the industry,
- trends over the period 2008-2017,
- a benchmark for individual orchard comparisons,
- a tool for modeling different scenarios such as changes in markets and production,
- a means of benchmarking industry performance internationally.

The model size has been maintained at a 115 ha property, of which 40 ha is planted in pomefruit. The data in this report represents the crops harvested in 2016 and 2017. The model is published in full and is available to all growers through Angus Crawford of APAL.

The Model's average gross yield was 47.2 tonne per ha in 2016 and 49.0 tonne per ha in 2017, a 3.8% lift. The 2017 yield is the highest average yield recorded since the OBA survey began.

Fruit quality as measured by Class 1 packout was up to 70% in 2016 which is also a first for this study. 2017 quality is predicted to be even better at 71%. This is an increase on the 66% packout in 2015, and 69% in 2014.

In Figure 1 below, the blue trend line of yield per ha shows a strong increase in gross yield since 2010, which is a positive trend for the industry. Average yield from the period 2008-11 was 34.7 t/ha while the last 3 years (2015-17), the average is 13 t/ha higher at 47.9 t/ha.

An even better trend is shown by the Class 1 green line, increasing from just over 20 t/ha in 2008 to 33 t/ha in 2016 and 35 t/ha predicted for 2017.

Figure 1 Australian Model Orchard yield and packout

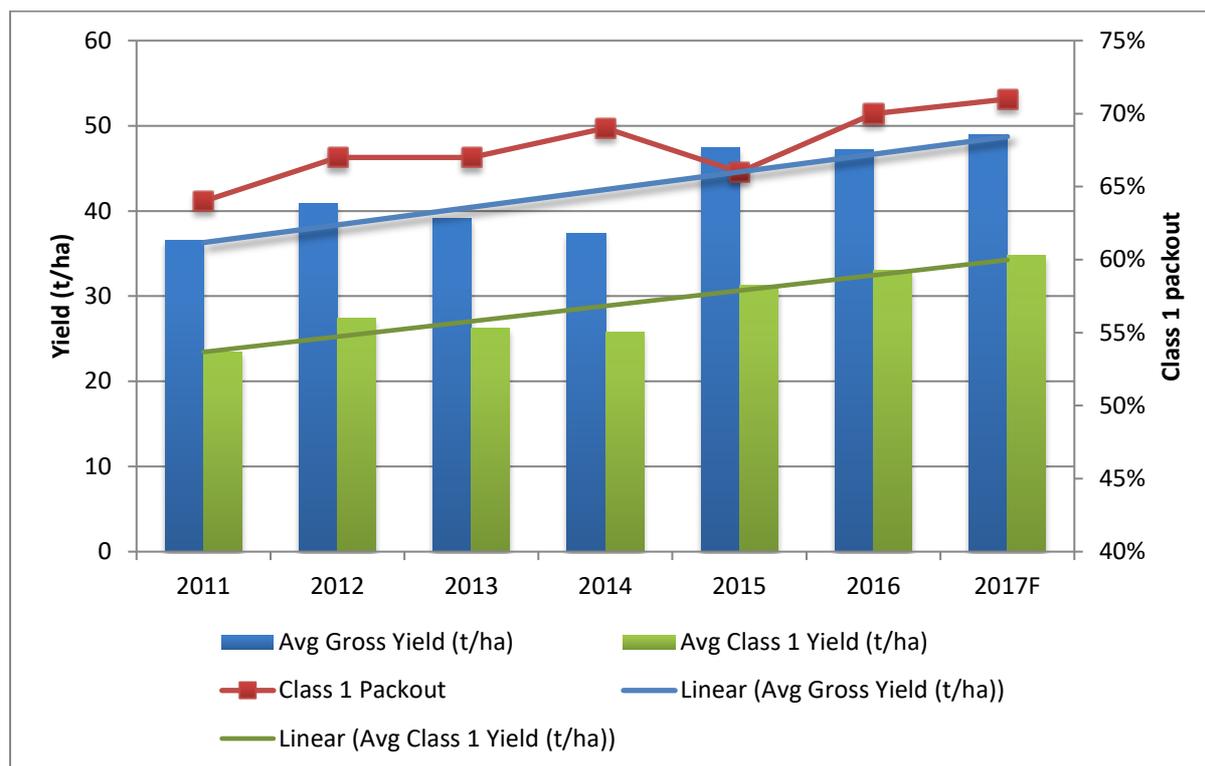


Table 1: Model orchard yield, packout, price and profitability overview

	2012	2013	2014	2015	2016	2017F
Avg Gross Yield (t/ha)	40.9	39.1	37.4	47.4	47.2	49.0
Class 1 Packout	67%	67%	69%	66%	70%	71%
Avg Class 1 Yield (t/ha)	27.4	26.2	25.8	31.3	33.0	34.8
Avg Class 1 return (\$/kg)	\$1.66	\$2.06	\$2.29	\$1.94	\$2.08	\$2.01
Revenue per ha	\$50,033	\$59,271	\$64,347	\$67,032	\$74,735	\$76,229
Surplus per ha (EBITDA)	\$4,517	\$10,151	\$11,314	\$7,520	\$13,283	\$11,271

The combination of higher gross production, higher Class 1 recovery and higher returns per kg has lifted revenues per ha in 2016 and 2017 compared to the poor year in 2015. The average Class 1 returns in 2016 were \$2.08 per kg resulting in a model revenue of \$74,735 per ha. Prices in 2014 were better, but as yield in 2016 was 8 t/ha higher the model revenue exceeds 2014 by almost \$10,000 per ha. Cash Surplus or EBITDA<sup>1</sup> increased

<sup>1</sup> EBITDA = Earnings before interest, tax, depreciation and amortization

significantly from all previous years, to \$13,283 per ha in 2016. Though model revenue in 2017 is expected to exceed 2016, cost increases mean that Cash Surplus is forecast to be lower at \$11,271/ha.

Costs continue to rise on a per ha basis, as seen in Figure 2 below. The 2017 forecast year is up on 2016, with all costs increasing particularly post harvest and labour costs. The cost increases on a per ha basis look alarming but one must remember that the model orchard is now harvesting and packing higher and higher volumes of fruit per ha so a large component of the increase is due to yield.

Figure 2: Cost of production per ha over time

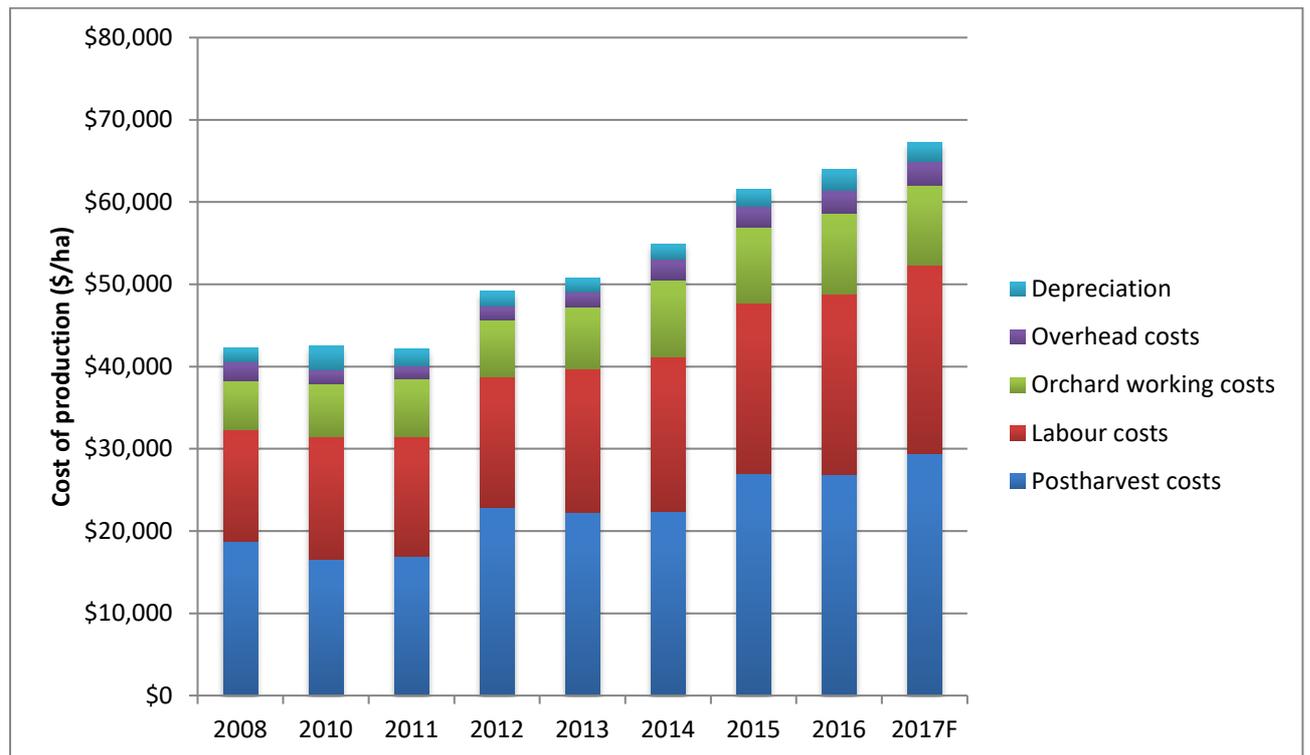


Figure 3: Cost of production per gross kg over time

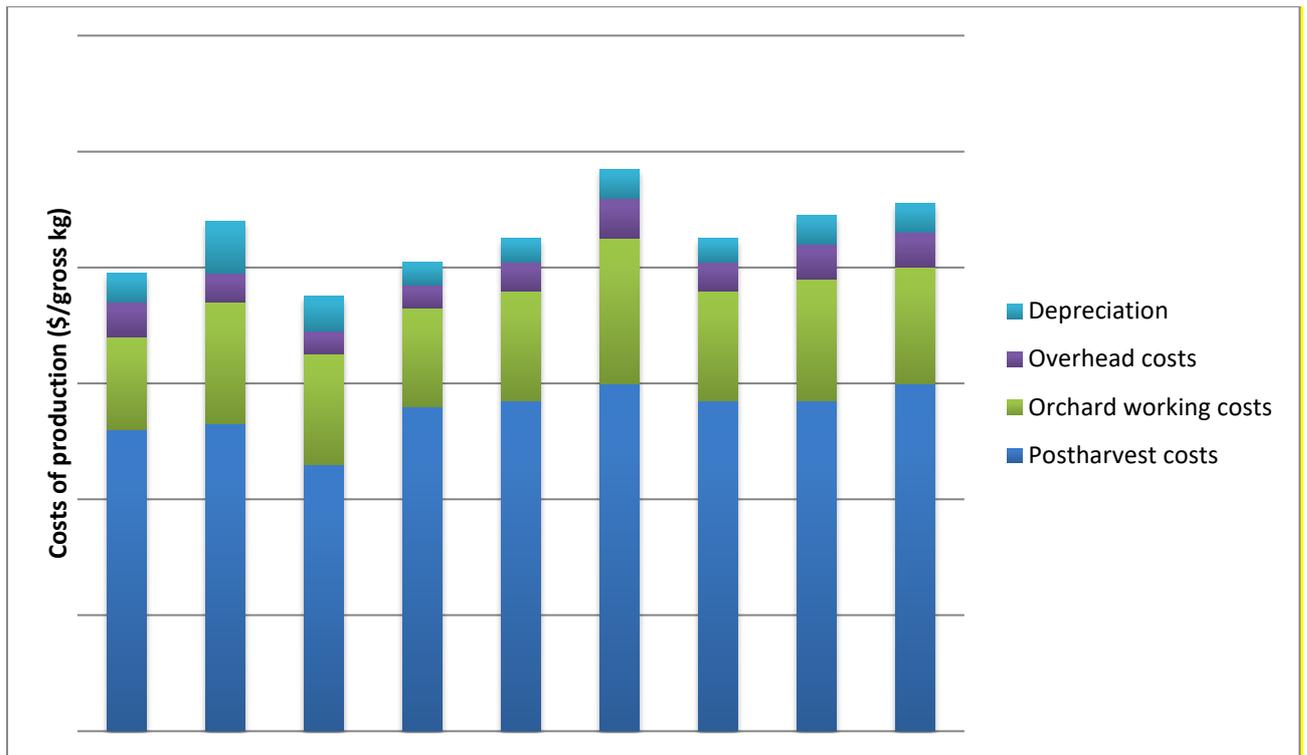


Figure 3 illustrates the overall trend in costs/gross kg since 2008 and shows that in contrast to the steep rise in costs/ha, as production/ha has also increased, giving a greater gross kg base over which to spread costs, costs/kg have remained fairly steady, rising by just under the 2.8pc rate of inflation for the period.

In summary, the 2016 growing year was a high yielding year, with high quality and good returns, resulting in a good financial result. 2017 is looking to be similarly positive. Gross volumes per hectare are up on 2015 (the previous record year). Growers are forecasting a slight lift in Class 1 packout and slight decline in returns (at the time of writing the 2017 crop was still being packed and sold). This is forecast to deliver greater revenue per ha at \$76,229, but a reduced cash operating surplus of \$11,271 per ha due to increasing costs.

### Variation around the average

Averages can be very misleading sometimes and its always the case that in any rural commodity, the differences between the min and max, lower and upper quartile, can be very significant.

The presentations shows several key slides that demonstrate the variation of result in attributes such as ; variety performance, revenue per ha, and profitability.

The data shows very clearly that all growers need to aim to be Upper Quartile if they are serious about making good levels of return on investment.

## Variety Performance

The theme of this year's Future Orchards program is Future Trees. It is therefore appropriate that we update the performance of the major Australian varieties of apples and pears.

The presentation shows a number of slides that show variety performance over time with yield, packout, returns and revenue.

Agfirst has for many years encouraged growers to set up systems that allow them to not only track overall business performance but also the performance of each variety or even better each block of trees.

The Australian Model Orchard is made up of all the significant varieties of apples and pears. Orchard model profit over the past 2 years has been \$176,000 in 2015, \$384,000 in 2016 and is forecast to be \$320,000 in 2017. Whilst that's good to know, shouldn't we also know what each variety is contributing to that profit.

In the presentation we will discuss how we have been able to break the total profit down to each variety. Table 2 below shows the summary of that work.

Over the past 3 years the Jazz, Grannies, and Pinks have all contributed positively. However, there are five varieties that are potentially pulling the business backwards they being; Fuji, Packham's, Reds, Sundowner and WBC. You can see how this information gives a very good guide as to where the business is making or not making money.

The overhead costs that will not go away if any block is pulled out are \$6,229/ha (admin, depreciation, interest and lease). This means that you're no worse off by leaving in a block that has a loss above -\$6000 per ha. On current performance that means that the Packhams, WBC, Reds and Sundowner are actually pulling the business down. The Model Orchard is making losses most years it grows these varieties. Fuji on the other hand is still making a contribution toward overheads albeit a small one.

So what, you say? Well hopefully you came to the presentation to hear our response.

It is from quantified data like this, that good decisions, including redevelopment can be made. We encourage all Future Orchard™ participants to utilise systems that can provide this sort of information. No longer in the professional game of fruit growing is the gut feel enough.

Table 1 AU Model Orchard Variety Profit Summary

Demo Company AU All Properties		<b>Block Profit Summary</b>										
Blockname	2017			2016			2015			3 Yr Avg (per ha)	6 Yr Avg (per ha)	
	Area	\$/ha	Total	Area	\$/ha	Total	Area	\$/ha	Total			
<b>AU Demo Orchard</b>	<b>40.0</b>	<b>7,761</b>	<b>310,427</b>	<b>40.0</b>	<b>10,316</b>	<b>412,621</b>	<b>40.0</b>	<b>4,275</b>	<b>171,009</b>	<b>7,450</b>	<b>7,530</b>	
Fuji OBA	3.2	-5,912	-18,919	3.2	-3,747	-11,991	3.2	-375	-1,199	-3,345	-4,466	
Granny OBA	5.2	29,198	151,827	5.2	22,566	117,341	5.2	15,361	79,879	22,375	18,955	
Jazz OBA	2.4	10,787	25,888	2.4	21,190	50,856	2.0	11,615	23,229	14,531	15,710	
Packhams OBA	3.6	-12,095	-43,540	3.6	-3,369	-12,127	3.6	-10,266	-36,958	-8,576	-6,896	
Pink Lady OBA	6.8	20,482	139,277	6.8	25,298	172,027	6.8	13,810	93,910	19,863	16,934	
Rosy Glow OBA	4.4	38,973	171,482	4.0	24,962	99,849	4.0	6,556	26,224	23,497	18,126	
Red Delicious OBA	1.6	-13,462	-21,540	1.6	-8,529	-13,646	2.0	-2,634	-5,268	-8,208	-9,798	
R Gala OBA	9.2	-2,725	-25,067	8.8	9,805	86,287	8.8	4,574	40,253	3,885	5,007	
Sundowner OBA	1.2	-16,983	-20,380	1.6	-19,195	-30,712	1.6	-2,617	-4,187	-12,932	-7,787	
WBC OBA	2.4	-20,251	-48,602	2.8	-16,165	-45,262	2.8	-16,026	-44,873	-17,481	-17,744	
<b>Company Totals</b>	<b>40.0</b>	<b>7,761</b>	<b>310,427</b>	<b>40.0</b>	<b>10,316</b>	<b>412,621</b>	<b>40.0</b>	<b>4,275</b>	<b>171,009</b>	<b>7,450</b>	<b>7,530</b>	

# Yield profiles of young Trees

Figure 4 Royal Gala production by tree age

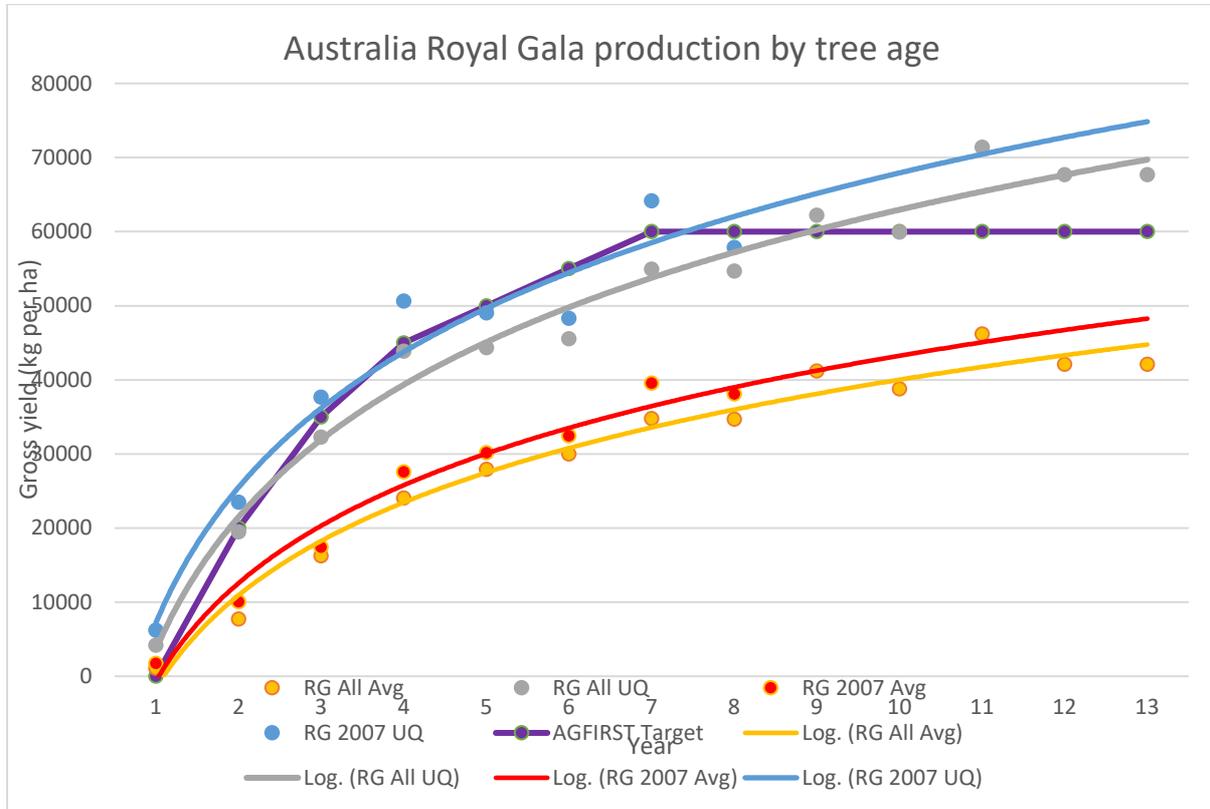


Figure 5 Pink Lady production by tree age

