

JUNE 2011 FUTURE ORCHARDS WALK

The Key Drivers of Orchard Profit in 2010

Prepared by Craig Hornblow and Ross Wilson

Introduction

In February 2011, Agfirst collected the 2010 "Orchard Business Analysis" (OBA) data from 19 orchard businesses. This was a repeat of the OBA carried out on the 2008 crop, that was published Nov 2009.

The objective of the 2010 modelling exercise was to determine the productivity and economic performance of the Australian pipfruit industry in 2010 and to make comparisons with the 2008 data to pick up trends over time.

The 2010 data has been analysed and a model orchard has been generated to represent an "average Australian grower" situation. The information allows an excellent opportunity for growers to benchmark their own businesses, identifying areas of success and potential improvement.

The model and supporting text has been published in the accompanying paper entitled "2010 Australia Pipfruit Industry "Orchard Business Analysis" and Model.

In addition, the Future Orchards program ran a "Business Development Program" in the 2010/11 season. This program allowed growers to track individual orchard block performance over time. This program used the online tool "OrchardNet". This built on the original Monitor Block program and has subsequently built up a strong database of Australian Orchard Block Performance which growers can use to scrutinise their own performance.

In March 2010, AgFirst analysed both the "orchard business analysis" and the block performance data and summarised the key success factors as follows:

1. Rapid canopy establishment of young plantings.
2. Achieving early and high yields.
3. Growing a high proportion of the crop to class 1 quality standard.
4. Focus on maximising orchard income, rather than minimising per hectare production costs.
5. Attention to detail.

In 2011 are these drivers the same or in the changing landscape have they changed?

This paper and supporting power point presentation analyses the new 2010 data and comments on the key drivers of success and outlines a process for implementing some changes to current strategies.



Financial Model Overview – compare 2010 to 2008

The 30 planted ha Model Orchard shows a significant reduction in profit in 2010, with production dropping and on-orchard costs increasing. There was no real change in the returns achieved per kg. The drop in class 1 production and therefore revenue is the most significant change between the two annual studies.

Table1: 2008 and 2010 Orchard Business Model Summaries Compared

	2010 Model	2008 Model	Change
Total area	88 ha	88 ha	nc
Planted area	30 ha	30 ha	nc
Gross yield	939 tonnes	1088 tonnes	-14%
Class 1 recovery	67%	69%	-2%
Total fruit revenue	\$1,330,028	\$1,584,750	-16%
Orchard operating cost	\$634,406	\$600,822	+6%
Post harvest costs	\$497,842	\$562,574	-12%
Cash operating surplus	\$197,781	\$421,354	-53%
Net trading profit after tax	\$39,347	\$214,665	-82%

The range in profit over the businesses surveyed is extremely high, with only 50% making a profit in 2010. In 2008, 91% of the orchard businesses made a profit.

The upper quartile group in 2010, however, are still maintaining good levels of profit. The upper quartile group are producing a cash orchard surplus that is 214% better than average and can therefore be a good indicator of the “Key Drivers of Success”.

Figures 1: 2010 Cash Orchard Surplus per hectare by Business

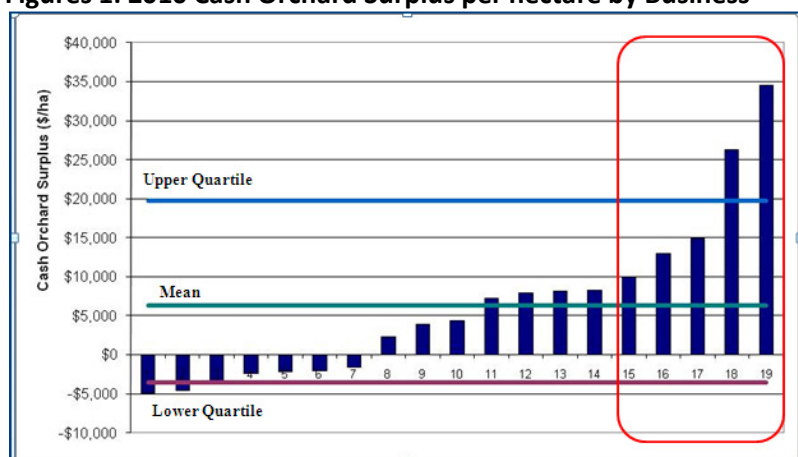


Table 2: 2010 Business Analysis summary: Average and Upper Quartile

	Avg \$ per ha	UQ \$ per ha	Avg \$ per gross kg	UQ \$ per gross kg
Total revenue	40,979	57,337	1.49	1.78
Less Orchard gate costs	20,014	20,945	0.75	0.64
Less Post-harvest costs	14,684	16,665	0.54	0.53
= Cash operating surplus	6,281	19,727 +214%	0.20	0.61 +205%

Revenue = Production, Packout and Price

The upper quartile is achieving 40% higher revenue per ha than the average. This is a result of a 20% higher average price, gross production being 14% higher and Class 1 packout being on average 15% higher than the average. We often hear the saying “the most important factor to work on in orcharding are the 3 P’s , production, packout and price”. This is a very clear illustration that this saying holds very true.

Production packout and price, in that order, are still the key drivers for profitability.

The major difference in the higher profit of the upper quartile is revenue: production, packout and price combining to achieve this.

Across a range of varieties the upper quartile group has 2-44% higher gross production and when combined with packout a resulting 25-74% higher marketable yield.

Price varies the least, but when used to calculate revenue the upper quartile have improvements over the average of up to 90%.

Table 3: Changes between the average and upper quartile

Variety	gross yield	market able yield	price	revenue per ha
Fuji	+44%	+74%	+1%	+77%
Granny Smith	+2%	+25%	+9%	+36%
Pink Lady	+31%	+54%	+17%	+80%
Red Delicious	+4%	+34%	-30%	-6%
Royal Gala	+8%	+34%	+17%	+56%
Sundowner	+15%	+56%	+21%	+90%



Maximising Class 1 production is easier said than done. There are many management factors that are involved. Some of them include:

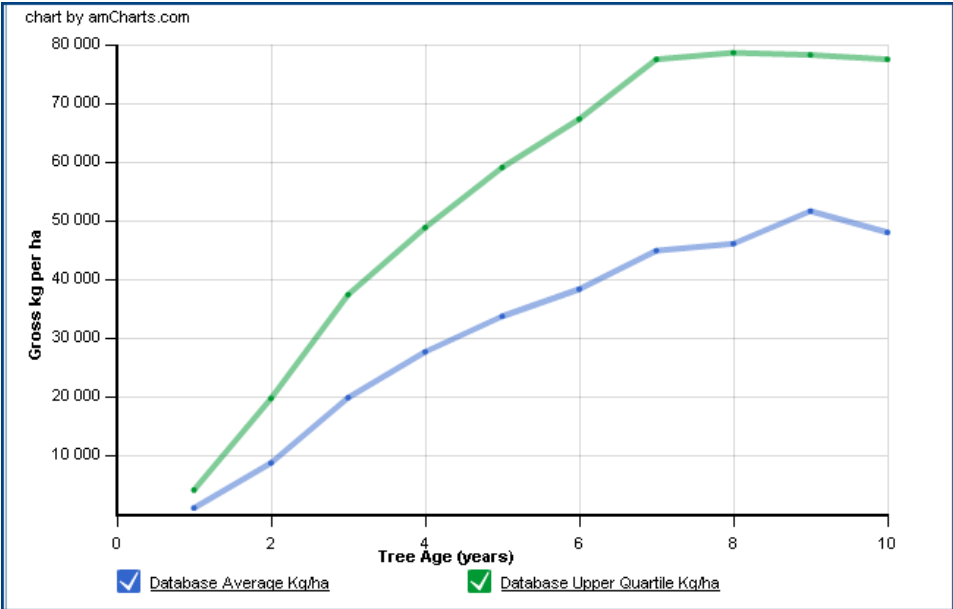
1 Managing climatic and pest risk

There were a number of businesses in 2010 that had very poor production due to crop failures. These included losses caused by dust storm, frost, poor fruit set, hail and birds. These types of losses are very prevalent in Australian growing environments and must be managed to give the business the ability to produce viable crops in most years.

2 High Class Orchard Management

FO2012 has heavily focused on the orchard management inputs required to lift Class 1 productivity. Again, this includes a multitude of inputs and skills of the orchardist to make it happen. Figure 2 demonstrates average performance of Cripps Pink grown under Australian conditions. The yield profile of the Upper Quartile demonstrates that world class production is possible under Australian conditions.

Figure 2 Cripps Pink Gross Production in Australia by tree age



3 Maximising price

Interestingly, the Upper Quartile growers not only received higher prices per kg for individual varieties, but they also have variety mixes on their orchards that had a higher proportion of the higher paying varieties. This would tend to suggest that the goal should be to grow a high proportion of premium products, grow them to a high quality standard and then make sure your selected marketing channel is able to maximise return.



Costs of Production

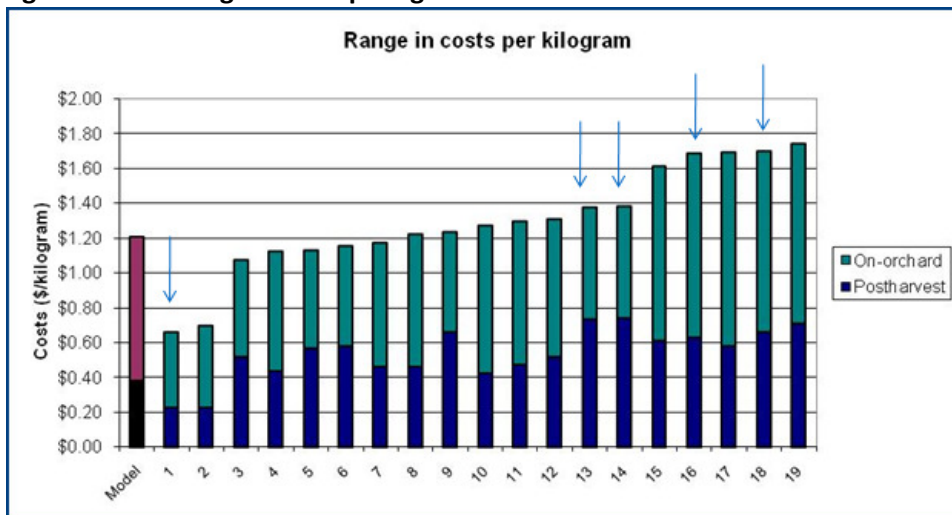
Costs are similar per hectare between 2010 and 2008, but the lower yield in 2010 and some cost increases means that the costs per kg have increased quite dramatically from \$1.07 kg to \$1.21 per gross kg. (see table 4 below).

Table 4: 2010 Orchard Costs compared to 2008.

	2008 \$/ha	2008 \$/ha	2010 \$/ha	2010 \$/gross kg	Chan ge from 2008
Labour	11,778	0.32	13,024	0.42	+11%
Orchard working expenses	5,908	0.16	6,456	0.21	+9%
Overheads	2,341	0.06	1,667	0.05	-29%
Total orchard gate costs	20,028	1.07	21,147	0.68	+6%
<i>Add</i>					
Post harvest costs	18,752	0.52	16,595	0.53	-12%
Total cost of production	38,780	1.07	37,742	1.21	-3%

An analysis of the upper quartile group in 2010 tends to reinforce previous findings that the top growers are not the lowest cost producers; see the blue arrows below.

Figure 2: 2010 range is costs per kg



In 2008 it was clear that the upper quartile group was spending more on labour to achieve higher production of better quality. In 2010 the upper quartile group is only spending more on thinning and



now significantly less on other wages. Typically this occurs as growers can identify clearly the key areas that increase production and revenue in each block and focus solely on that.

As in the 2008 survey the higher per hectare cost by the upper quartile group achieved a lower per kg cost when higher production is the result. The more you spend the more you save?

Table 4: 2010 Labour Costs, average and upper Quartile

	Avg \$ per ha	Avg \$ per gross kg	UQ \$ per ha	UQ \$ per gross kg
Harvesting	3,593	0.13	4,286	0.13
Pruning	2,022	0.08	1,913	0.05
Thinning	1,632	0.06	2,475	0.08
Other wages	3,200	0.12	1,973	0.06
Levies	1,453	0.05	1,945	0.05
Total	11,903	0.44	12,592	0.37

Cost control must be part of any successful business and orcharding is no different. However, each orchardist needs to be continually aware that the key drivers of success are the 3 P's. Prudent utilisation of resources and hence cost input are essential to ensure that the 3 P's are optimised.

Growers should be also be aware of their cost structure and continually identify and implement more efficient ways to carry out tasks.

Our key drivers therefore remain the same

- **Production, packout and price, in that order!**
- **Spend more time analysing and improving revenue than focusing on costs.**
- **Be aware and manage your cost structure**



VAHA

Once we have identified or reinforced some of the key strategies, we have to implement (execute) them within the business. We all have complex businesses and at times it is hard to follow through on strategies as seasonal pressures come on. We need to develop processes that help us to stay on track and sometimes more importantly communicate clearly with others our goals and strategies.

Keep the descriptions short and focused, the detail will be up to the block manager.

1. Analyse the blocks in detail.
2. Describe the key strategies.
3. Allocate a time frame for each.
4. Use the horizontal application sheet to combine each of the block strategies to a monthly orchard plan.

VAHA

1. Vertical Analysis: We take these key drivers down to a block by block basis, identifying key strategies for each block. Drill down into each block, use tools like OrchardNet to help identify the potential performance and then the limitations.

Next write down 3-5 simple strategies to overcome the limitation, with a time frame for completion. This process is not about listed key work areas, spraying, harvesting, etc, it is about identifying and completing strategies that overcome the limitations and improve orchard performance.

2. Horizontal Application: Improve the execution by outlining a season-long plan that integrates all the block strategies into to an annual plan that is easily reviewed and shared. Sometimes I have seen this on a white board across the smoko room wall so the staff can see and discuss it.

We have outlined an example below of how you can complete the VAHA, and in the orchard walks we will complete these for actual examples as well.



Vertical Analysis Example

Block Analysis

Block	-Hill3	Variety	Pinks

Ha	2.1	row Spacing	3.5	Yr planted	2005
Density	2800	In Row Spacing	1	Trees	5880

Performance

	Historical		Current		Potential
	2008	2009	2010	2011	2013
tonne/ha	40	40	47	48	60
tce/tree					
fruit /tree	84	81	96	95	122
packout	65	64	65	63	68
Fruit size	170	175	175	180	175

Limitation

(management, technical, resource, capital, timing, Variety)

Weak areas in south end low yield

Vigour in rows 2-9

Colour could be better

Strategies (transfer key strategies to horizontal Application)

Action	timeframe
Identify and mark vigour range	June
Rootprune vigour	September
Extra fertiliser weak	Sept, Nov, Jan
Trial Cloth	March



Horizontal application (Annual Plan) example.

May All Blocks reviewed- orchard net	June Identify/mark vigour -Hill3
July	August Detailed prune -flat3
September Rootprune vigour-Hill3 Extra fertiliser-Hill3	October Irrigation check – flat3 Minimal chem. Thin – flat3
November Extra fertiliser-Hill3	December
January Extra fertiliser	February
March Cloth Trial – Hill3	April

