JEB/MLT

10 December, 2001

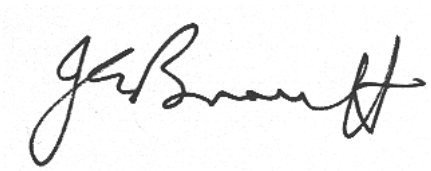
Citrus Industry Inquiry,
Productivity Commission,
LB2 Collins Street East PO,
MELBOURNE. VIC. 8003

RE: CITRUS GROWING AND PROCESSING

Following is the Murray Valley Citrus Marketing Board submission for consideration by the Productivity Commission.

It should be noted that Board representatives and their CEO have also worked with the Australian Citrus Growers Inc. and support the content of their separate submission.

Whilst the Board's position totally supports that of ACG, it attempts to complement their approach by providing supplementary information rather than duplication.



John BRANIFF,
Chief Executive.

STRENGTHENING THE CITRUS GROWING BUSINESS

A Submission to the Productivity Commission Inquiry into the Citrus Industry

Prepared by

Murray Valley Citrus Marketing Board
assisted by Rendell McGuckian

30 November 2001.

CONTENTS

BACKGROUND

The historical development of citrus growing in the Murray Valley was largely influenced by the post war soldier settler 25 acre blocks. After World War 2 conditions for taking up these allocations and the concessional loan on offer was that 75% be planted to Valencias and restriction of a maximum area of 25 acres. Obviously market conditions, changes to Government trade policy and deregulation make such conditions seem ludicrous today.

Yet, from the perspective of the greater majority of growers in SE Australia, it was not until the financial impact of tariff reductions and the loss of the 10% local content sales tax concession became clear during the early to mid nineties that the need for varietal adjustment out of Valencias started to be taken seriously. Up until this time (with a few exceptions), citrus growers had become used to a long established trading pattern which typically saw around two-thirds of their production taken up by the processing sector, with most of their packed fruit going to domestic markets, and a small volume going to export.

Market distribution from the Murray Valley today has become heavily focused on exports, particularly with Navel varieties. However, a significant proportion of growers' fruit which is unsuitable for fresh markets will still be graded out as overrun for processing. The actual packout and processing proportions vary widely depending on the timing during any given season and the variety (Valencias being the preferred juicing variety).

The growing of quality citrus varieties to match export and domestic market requirements, coupled with the need for fair and reasonable prices from processing are essential elements for the financial viability of citrus growers.

THIS SUBMISSION

This submission has been prepared by the Murray Valley Citrus Marketing Board (MVCMB). The Board represents 583 registered orchards along the Murray River in NSW and Victoria who produce approximately 20% of the national crop by tonnage.

The mission of the MVCMB is to facilitate change and development to enable the Murray Valley Citrus Industry to be internationally competitive.

This submission:

- outlines key characteristics of citrus growing for the Productivity Commission Inquiry
- Provides a vision of a healthy citrus industry
- provides recommendations that will assist in achieving that vision

This submission places a strong emphasis on the analysis of citrus growing businesses gained from benchmarking with Murray Valley growers. It should be noted that the growers involved are regarded as **above average** in terms of being responsive to market requirements and good cultural practices.

METHOD OF DETERMINING PROFITABILITY

Business performance of citrus growers has been measured using *Cost of Production* and *BizCheck* benchmarking for citrus growers from the Murray Valley Region. The data set is from 1994/95 to 1998/99 for *BizCheck* (whole of business). *Cost of Production* (oranges enterprise only) is from 1995/96 to 1999/00.

The surveys indicate that profitability fluctuates enormously from year to year and this masks any trend for either improving or worsening profitability. It is known that 2000/01 was a very poor year due to lower export prices – particularly from the USA navel program – caused mainly by uncharacteristic fruit quality problems. Data for 2000/01 year is still being collated.

It should also be noted that 2001/2 season is looking a better year for returns than 2000/01 and may reflect similar levels of profitability as 1999/00.

The results reflect the performance of benchmarking participants only. These are believed to be "above average" for scale and possibly profitability. Therefore, these results may overestimate citrus profitability in the wider citrus growing community and underestimate the financial impact of the 2000/01 year. i.e. it is a conservative analysis.

The benchmarking sample includes corporate and family businesses. Performance of both types of business structure has been similar and this factor is not likely to significantly influence the results.

Where other crops influence the results in *BizCheck* only indicators specific to citrus have been used, or where this is not possible the results for citrus specialists only have been used. A citrus specialist has been defined as having at least 50% of total farm income being derived from sales of citrus.

There are benefits in terms of tailoring crops to soil types, managing labour and risk management for a horticulturist in having a diversity of crops, provided that each crop is of adequate scale to afford sufficient economies of scale.

This analysis is based on average business performance. It should be noted there is enormous range in performance around this average. Some will be much better off and some much worse off.

RESULTS ON PROFITABILITY

Citrus profitability from *BizCheck* 5 year average of citrus specialist is tabulated below.

Table 1 BizCheck Results averaged for 1993/4 to 1998/9 Citrus specialists

Income /Costs	**$/ha**	**details**
Citrus Income	$6,896	26 t/ha yield x $265/t price
Total of Citrus Costs	$5,802	See costs tabulated below
Citrus Profit before owners salary and return on owners equity	*$1,094*	

Table 2 BizCheck Costs averaged for 1993/4 to 1998/9 Citrus specialists

Break up of average costs for citrus growers	**$/ha**	**details**
Operating Costs	$4,478	for citrus specialists
Interest on borrowings	$414	(6% income)
Machinery depreciation	$310	(machinery value at 0.3 of income depreciated at 15%/year)
Orchard depreciation (to cover replanting costs)	$600	(at $18,000/ha over 30 years[1])
Total costs above	$5,802	

The tables above show that a citrus owner on average received $1094/ha of citrus to fund their own salary and provide a return against their own capital (equity) invested.

The *Cost of Production* survey for navels and Valencia's which costed owners time and an interest cost on all capital (both owners equity and borrowings) showed that it costs around $8,000 to $10,000/ha, when these items are fully costed. These figures are shown in Appendix A.

In summary for the survey sample citrus has provided on average $1,094/ha for owners salary and return on owners equity.

[1] It is considered that a 25 year life of orchard is more sustainable than 30 years, but most growers do not achieve 25 years so 30 years has been used. This is explored in more detail in section **Error! Reference source not found.**

There is considerable variability around the profitability average.

The variation over different years is shown below, note this also includes income from other crops in the sample.

Table 3 Profitability ranges for 1994/5 to 1999/00 per ha of irrigation (includes other crops)

Profit $/ha from BizCheck	1994/95	1995/96	1996/97	1997/98	1998/99
Top 25%	3,269	7,272	6,995	4,951	7,071
Bottom 25%	-1,172	-228	-1,325	-2,891	-1,725
median	472	1,440	1,014	456	1,658

Disposable income per family is ultimately what is available for a citrus growing business to invest in assets (on-farm or off farm), paying tax and for living.

The percentage of businesses in different ranges of farm profit and disposable income per family in the BizCheck sample for the Murray Valley are shown below. These are believed to be above average when compared with the remaining industry.

Table 4 Distribution of Farm profit/family (fpf) and disposable income per family (dif) after allowing for depreciation of irrigation area (excluding off-farm income)

Farm profit or disposable income/family from *BizCheck*	1994/95 25 growers		1995/96 47 growers		1996/97 43 growers		1997/98 44 growers		1998/99 35 growers	
	fpf	dif	fpf	dif	fpf	dif	fpf	dif	fpf	Dif
Below $30,000	72%	44%	47%	19%	58%	40%	73%	57%	34%	20%
$30,000 to $60,000	16%	40%	13%	21%	12%	23%	0%	16%	26%	17%
More than $60,000	12%	16%	40%	60%	30%	37%	27%	27%	40%	63%

The data shows that off-farm income is extremely important contributor to the disposable income per family, particularly in low profit years such as 1994/5 and 1997/98.

Most citrus growers are smaller than this sample and these growers would be even more reliant on off farm income.

The growing businesses can be divided into three sections by profitability

Top third - large in scale, low cost of production, high profits, not heavily reliant on off farm income. Able to fund redevelopment and expansion.

Middle third - profits are consumed in living expenses, usually reliant on off farm income for expansion or redevelopment

Bottom third - small in scale, highly dependent upon off-farm income for meeting living expenses, sometimes in this category due to a high proportion of trees undergoing redevelopment

KEY DRIVERS OF CITRUS PROFITABILITY

Income per ha (yield x price)

The table below shows the prices received in the Murray Valley benchmarking survey.

Also note there have been changes in grower sample surveyed which will also influence results.

Table 5 Orange prices received for 1994/5 to 1999/00 Citrus

Price ($/t) From Cost of Production Survey weighted average (unless stated)	**1994/95** BizCheck Survey	**1995/96**	**1996/97**	**1997/98**	**1998/99**	**1999/00**
Valencia	-	-	143	130	278	205
Navels	-	-	425	309	650	596
Valencia/Navel combined	184	260	233	202	430	391

Clearly growing navels provides much higher prices and more income per ha than valencias. As a result there has been a large reduction in the area and tree numbers of valencias. This has been achieved by top working of valencias to navels and also replanting.

This is illustrated in the Murray Valley by the change of orange varieties in the last decade as shown below.

Table 6 Murray Valley navel and valencia plantings from 1991 to 2001

Year	**Navel area ha**	**Valencia area ha**	**Total Navel + valencia area ha**
1991	2,566	3,256	5,822
2001	3,462	2,021	5,483
Change in area	+896	-1,235	-339

Prices in 2000/01 are expected to be significantly lower due to a higher yielding crop and quality problems, particularly with US navels. 2001/02 is expected to show better returns, perhaps similar to 1999/00 for some growers. However the crop yield will be significantly below average for navels and valencias across the region.

Table 7 Yields received for 1994/5 to 1999/0

	1994/95[1]	1995/96[1]	1996/97[1]	1997/98[1]	1998/99[1]	1999/00[2]
Citrus yield	27	23	29	29	20	29

Citrus yields have not significantly changed in the last six years. This is not surprising as this is influenced by:

- tree age
- biennial bearing/climatic influence
- variety mix changes
- adopting of pruning/tree canopy management to improve quality and fruit size
- sample variability.
- Replanting/top working of valencias

The relationship between yield and profit is not straight forward.

- Regions experience high yielding years, where lower citrus prices often result due to heavier supply and smaller fruit size. This when combined with higher picking and marketing costs often reduces profits, despite the higher yield.
- Regions experience low yielding years the result is usually lighter supply, larger fruit size and higher citrus prices. This when combined with lower picking costs (per ha) and lower marketing costs sometimes can increase profits, despite the lower yield.

Successful growers are able to achieve higher than average prices, through good fruit size, in high yielding years. Then above average yields in the lower yielding years. **This means maintaining consistency in yielding and fruit size.**

Table 8 Citrus income/ha received for 1994/5 to 1999/0 Citrus

Income $/ha	1994/95[1]	1995/96[2]	1996/97[2]	1997/98[2]	1998/99[2]	1999/00[2]
Citrus (actual yield)	4,375	6,231	7,688	6,924	10,653	10,885
Valencias	-	-	5,937	5,154	8,210	7,703
Navels	-	-	9,650	8,413	10,653	12,395

Although income per ha has improved since 1993/4 only in the last two years has it exceeded average cost of production (including owners time and return on capital).

In general income per ha needs to exceed $8,000/ha to $10,000/ha consistently to cover average total costs.

[2] from BizCheck Survey all citrus median value

[3] from Cost of Production Survey navels and valencia not adjusted for tree age

Growers experience is that achieving consistent income per ha is harder with older trees. Therefore low replanting rates discussed previously limit the profitability of citrus due to fluctuating yield and quality in older trees.

Citrus provides a good return per megalitre of irrigation water

The citrus industry generates an income per ML of $500 to $1000/ML depending on income per ha for the year. Although this is lower than vines which generates approximately twice this it compares well with the major water users in the Murray Valley of:-

- $100/ML for many broad acre grazing industries,
- $100 to $300/ML for low value annual croppers such as rice
- $200 to $600/ML for dairy farms

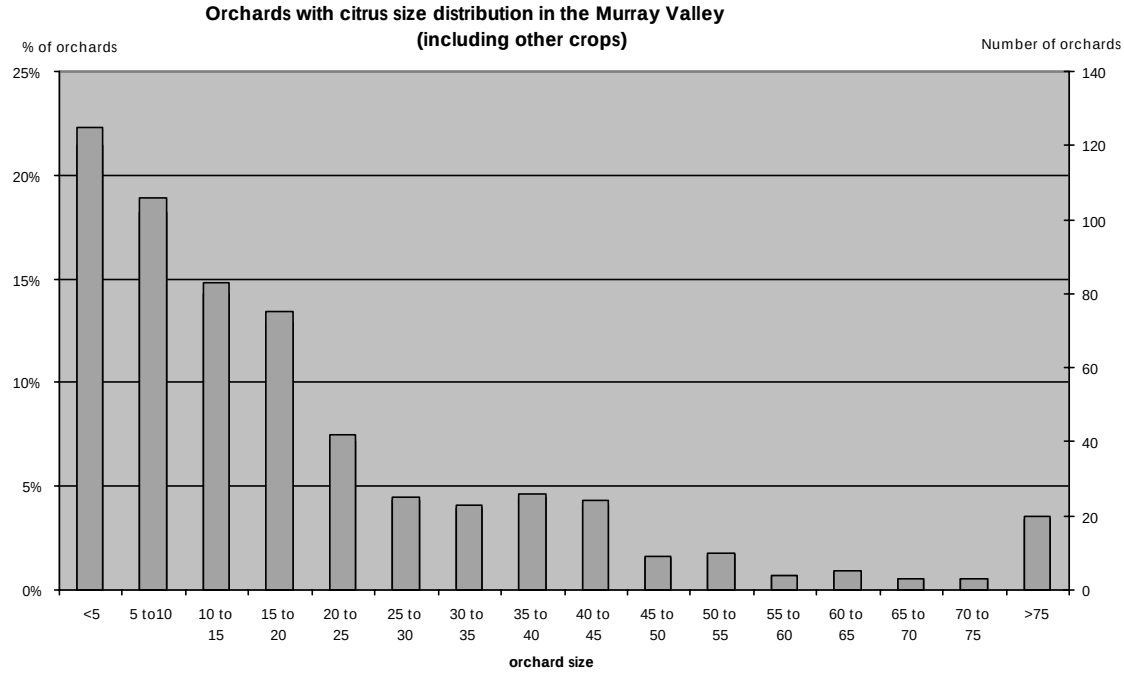
Clearly citrus can generate high returns for an increasingly scarce resource and given profitable cost structures (low cost) can out compete these industries for water purchases.

Business Size

Data collected by the Murray Valley Citrus Marketing Board (SUNLIS 2000) indicates that for the Murray Valley only 16% have more than 20 ha of citrus (ie 84% of citrus orchards are less than 20 ha) and 65% have less than 10 ha of citrus.

In terms of total orchard area (which includes other crops in one contiguous block) then the property size distribution is that 67% are less than 20 ha. This is illustrated below

Figure 1 Orchard size distribution in the Murray Valley



Business size is an important component of viability. In general business size needs to be large enough to generate at least $200,000 gross income per family in order to generate sufficient profit even at good cost control to pay for ongoing redevelopment and expansion.

This is equivalent to 20 ha of orchard at $10,000/ha gross income or 40 ha at $5,000/ha. This suggests that 67% of orchards (being less than 20 ha) are insufficient in scale to be viable in the long term and there is a need to increase average orchard size. Some businesses will have more than one orchard, but where this is not contiguous the economies of scale will be diminished.

In the Murray Valley benchmarking sample growers with the highest profit consistently are above average in size and usually are 20 ha of citrus or more.

20 ha is approximately 8000 trees/business. The figure below illustrates the number of trees held per business for different States (derived from 1995 ABS data).

Figure 2 Number of trees held per business 1995

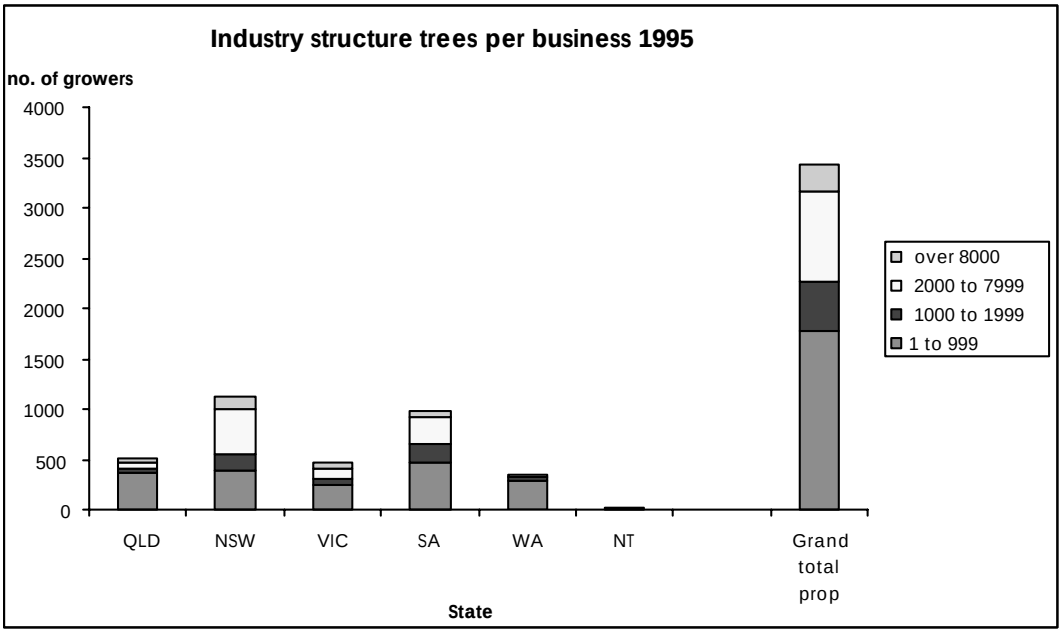


Table 9 Estimated Industry Structure 1995

No. Trees per Business (ABS[2])	No. Growers (ABS)	% of Growers (calculated)	Hectare per Grower (est.[1])	Adopted average size	Area of Production Ha (est.)	% of Area of Production (est.)
1- 999	1,772	52	0 - 2.5	2	3,544	13
1,000 - 1,999	502	15	2.5 - 5.0	5	2,510	9
2,000 - 7,999	896	26	5.0 - 20	15	12,544	44
> 8,000	263	8	> 20	40	9,731	34
TOTAL	**3,433**	**100**			**28,329**	**100**

[1] estimated using an average of 400 trees/ha [2] Derived from Australian Bureau of Statistics 1995

In summary in 1995 it is estimated that:-

- only 8% of citrus growers (263) represents 34% of the production area, ie. only 263 growers are large enough to provide consistent high profits for redevelopment on a sustainable basis with citrus income only.
- 26% of citrus growers (896) represents 44% of the production area. These growers would be reliant on citrus, but also need extra income from other crops or off-farm sources.
- 67% of citrus growers (2,274) represents only 22% of the production area. Generally, these growers would not be reliant on citrus. Citrus would be a relatively small part of their income compared to other crops and off-farm income sources. Having less than 5 ha of citrus would suggest that these citrus growers could not have a competitive cost of production.

Small business scale for the majority is probably the biggest limitation on re-development and industry growth. It affects at least 67% of all citrus growers.

It could be argued that this issue has come about as a direct result of Government policies in the design and implementation of irrigation districts with the block sizes adopted being too small.

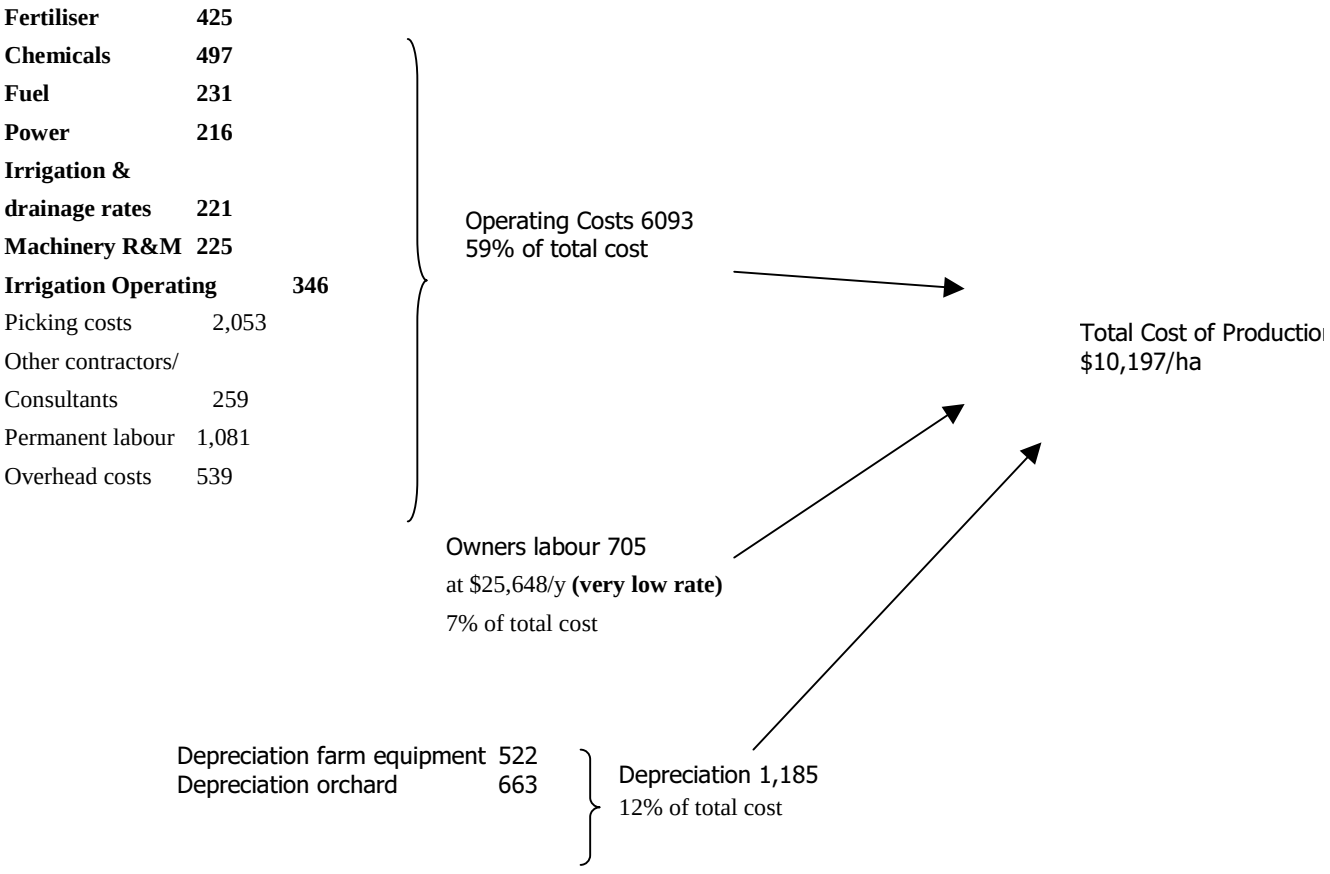
Clearly there is a major need for strategies to assist the industry move to more viable business size units.

Some of the issues that need to be addressed in increasing scale are:-

- Access to land for expansion
- Rationalisation of infrastructure set up for small properties (particularly in older irrigation districts)
- Labour management as owners move from being workers to employers.
- Matching crops to different soil types
- Enterprise mix for risk management
- Technology to reduce labour inputs eg in irrigation
- The stepping stone of moving from off-farm income to full time growing as scale increases

Cost structure

Figure 3 Cost per ha of growing citrus from MVCMB Cost of Production Survey 1999/00



Interest/Return on Capital (at approx. 8% with adjustments)		Interest 2,214
- on operating capital	250	22% of total cost
- lost production during redevelopment	352	
- on farm equipment	279	
- on developed land value	1,333	

N.B Operating costs in this year were higher than long term average (and income was also).

Capital Costs represent a large proportion of costs in citrus growing. These costs are the ones that can be avoided in the short term by not replanting and replacing. However if this is not "caught up" the impact is long term loss of viability.

Debt levels in the industry appear to have been fairly constant over the benchmark period with equity around 90%. This suggests that the response to low income years is to delay replanting rather than take on debt.

Owners labour has been imputed at a very low rate of around $26,000/year. In reality this should probably by at a higher rate, but has been used to allow comparison with previous years.

Trends in cost structure

Costs have been looked at as operating costs, interest and debt, and the capital costs of land and machinery.
Operating costs comprise variable and overhead costs the trend in industry average of the survey sample is shown below:-

Table 10 Operating costs from MVCMB Cost of Production Navels and Valencias Survey.

Year	1995/6	1996/7	1997/8	1998/9	1999/0
Variable cost/ha	3,318	4,136	4,289	5,264	5,554
Overhead cost/ha	1,080	910	667	451	539
Total operating costs	=4,398	5,046	4,956	5,715	6,093
Operating costs as % of income	78%	72%	78%	58%	54%

The table shows that the % of income spent on operating costs has declined as income has risen faster than costs. However, 2000/01 is expected to sharply reverse that trend as income was much lower than expected. 2001/02 is expected to return to better levels of income. However, for growers with old trees and old varieties where there has not been such a good rise in income the % of income spent on operating costs would be expected to rise.
Debt/interest costs from the *BizCheck* survey are show below.

Table 11 The trend in debt and interest costs (median values) for the *BizCheck* survey

Year	1994/5	1995/6	1996/7	1997/8	1998/9

Debt as a ratio of farm income	0.3	0.4	0.4	0.4	0.4
Financing cost as % of income	6%	3%	4%	6%	6%

Debt has remained relatively constant relative to income over the years surveyed. One reason for this may be that the response to poorer years tends to be to reduce replanting rates rather than taking on more debt.
However, it is important to note that as income has risen then so has gross debt.
Capital values of land, water and machinery have increased. These have been estimated by participants for the Cost of Production survey.

Table 12 Capital values land and machinery

Year	1995/6	1996/7	1997/8	1998/9	1999/0
Capital land value/ha	21,070	-	22,125	26,599	26,701
Machinery $/ha	2,725	1,907	2,440	3,427	3,483

The trend in land values has been strongly influenced by high demand for land and water for the wine industry, which has grown rapidly and experienced high returns during this period. Also demand for rural residential purposes may have influenced this. While this has been good for asset growth of citrus growers, high capital values reduce growers ability to fund expansion.

Conclusions regarding profit drivers

The data suggests:-

- Income per ha has improved and has been profitable for growers who have had more navels, but not for growers who have a high proportion of valencias. Other growers advise that tangelos and some mandarin varieties have provided equal or better profitability than navels for brief periods.
- Property size is too small for most growers to maintain sufficient funds for redevelopment and expansion. The issue of scale is as a result of past Government policies in the setting up of irrigation areas.
- Operating costs have risen per ha which has been a problem for growers with low incomes per ha (eg high proportion of valencias)
- Debt levels in relation to income have remained constant, but are likely to be higher in gross terms
- Land values have increased due to wine grape boom and possibly rural residential use in some areas. This has made increases in scale more difficult for citrus growers.
- Off farm income is essential to the long term financial sustainability of most citrus growers

The impact of small size and a high proportion of valencias for many citrus businesses has been low profitability. This has meant that after meeting family needs there is inadequate funding for redevelopment.

the key issues that limit citrus growing profitability

LONG LEAD TIMES LIMIT MARKET RESPONSIVENESS

The time lag between planting and achieving fully bearing yield is approximately seven years.

Production is very low for the first three years and a positive cash flow may not be achieved until after year ten (to cover development costs, land value, and operating costs).

If not including land value then a positive cash flow can still take eight years or even longer when accounting for the lost production from trees being removed.

Funding ten years of negative cash flow for areas being redeveloped is a key issue that limits market responsiveness.

Therefore during times of low cash flow the logical response by growers is to lower short term risk by deferring replanting. This is particularly true when income from the older varieties still can cover operating costs.

IMPACT OF TARIFFS ON INDUSTRY READJUSTMENT

In the past Government tariffs on imports were higher this resulted in:-

- encouragement to plant valencias on a large scale. These trees are now at the end of their useful life and also do not match the new market requirement for more navels
- market upswings which have enabled growers to fund replanting programs.

It could be argued that the removal of tariff protection has :-

- reduced the number of price upswings occurring, especially for growers with a high proportion of valencia's and as a result replanting has become more and more delayed.

- Occurred at a time when trees planted as a result of the tariff now need replacing and the cash flow no longer exists to fund the adjustment needed.

Therefore Government policy has inadvertently contributed to a large proportion of older trees no longer relevant to the market throughout the industry. These trees are now unprofitable or of low profit and many businesses are not capable of funding redevelopment to varieties the market demands.

Government policy, initially distorted the market and then secondly through poor timing (removal of tariffs when trees were old) has made re-adjustment more difficult.

For example, much of Nangiloc was developed in the 1960's to 1980's and these trees now need to be replaced.

SUPPLY TO THE PROCESSING SECTOR

The citrus processing sector is by necessity a net importer of frozen concentrated orange juice (FCOJ) with total annual requirements for all juice categories put at 600,000 t0 640,000 fresh tonnes. The actual volumes required can fluctuate significantly each year depending on the size of Australia's production. Citrus production nationally can vary by more than 100,000 tonnes from one year to another due solely to climatic and tree physiology influences.

The price of FCOJ out of Brazil and the volume of Australia's citrus production are the two key factors which influence the volume of imports. World production is dominated by Brazil and Florida. Pricing out of Brazil continues to be extremely volatile in response to worldwide supply and demand. There have been extended periods over the past decade when the world parity price for FCOJ has fallen below the basic cost of picking (after conversion to the price for an equivalent fresh tonne). The world parity price determines the price Australian processors will pay for citrus destined for concentrate processing.

The reduction of tariffs on FCOJ imports plus the removal of the Australian content sales tax concession in 1995 has ensured that Australian growers cannot hope to compete with Brazil or Florida. Industry leaders recognised this as the various trade policy reforms were introduced many years ago. These changes to Trade policy have essentially driven the industry to devise strategies which reduce growers dependence on income from processing to concentrate. This has inevitably meant a heavy reduction in Valencia plantings which have historically dominated the varietal mix on citrus orchards since the late 1940s and 50s.

The other side of the processing sector is the fresh juice market segment, ie citrus juice products which are made entirely from the natural juice of the fruit and not reconstituted from FCOJ.

This market sector **should** and **could** be viable for growers to supply. Industry estimates for the amount of fresh oranges required for Australia's production of orange juice brands in this market segment are at least 180,000 tonnes per annum and growing.

However, two major factors work against growers receiving fair and reasonable, consistent prices for fruit being processed in this single strength (not from concentrate) segment.

The first is the imbalance of **market power** which is totally dominated and controlled by the large processors. Growers have absolutely no opportunity to be involved in any negotiation process. Typically, in the Murray Valley region growers rely on their packers to find processing markets for "overrun" fruit which is graded out as unsuitable for fresh market packing. The packers also have no market power dealing with processors. Even where contracts are drawn up, the prices, terms and conditions are virtually dictated by the processors. There is also no way of monitoring the volume of fruit for which "spot" parity prices are paid, which may be used in the fresh juice segment.

Murray Valley Citrus Marketing Board believes that this important citrus market segment can only be made sustainable (for processors and growers) if growers/packers have some reasonable input into the negotiation of prices and supply contracts on a long term basis.

Without this, growers will continue to reduce Valencia production to below the level required by processors for their "fresh" orange juice brands.

We therefore recommend that the Commission give consideration to supporting an appropriate dispensation under the Trade Practices Act for some form of collective negotiation by grower representatives with processing companies.

The second is **" Truth in Labelling"**.

Recent actions by the ACCC against fruit juice manufacturers using misleading label descriptives are applauded by citrus growers. However, consumers are still being confused and misled by terms such as "100% juice" (on products made entirely from imported FCOJ or reconstituted to some extent), "100% Australian owned" (on products containing or made entirely from imported FCOJ). There are numerous products still on retail shelves which are misleading or at best ambiguous in the brand name, country of origin and/or content descriptions. **Considerable weight of anecdotal evidence clearly indicates that consumers intending to purchase Australian grown orange juice are being misled into unwittingly compromising their purchase intentions.**

The Board believes that the present labeling laws, despite some recent improvements, do not go far enough towards ensuring that consumers are presented with a clear, informed choice of purchase. Products containing imported FCOJ or reconstituted with Australian FCOJ need to be identified with a clear statement such as "reconstituted" or "contains imported juice" to clearly identify these brands from those made of fresh, single strength Australian juice. Alternatively, a statement such as "not from concentrate" could be used on the fresh juice products as is the practice in the USA.

HIGH TREE AGE

Cash flow problems occur when a business is dominated by too many young or too many old trees.

While young trees take time to reach economic production, older trees can also become uneconomic due to small fruit size, inconsistent cropping (biennial bearing) and higher labour costs (large tree size).

It is crucial that young trees are planted at a consistent rate to maintain economic viability, as a property becomes older.

An industry accepted figure for tree life is 25 years. To do this 4% of an orchard on average needs to be replanted or 24% is under six years old. In comparison the % under six years old in the Murray Valley and average orchard life at this replanting rate has been:-

Table 13 Tree age under 6 years from benchmarking participants

	1994/95[1]	1995/96[1]	1996/97[1]	1997/98[1]	1998/99[1]
% are under 6 years median value	14	10	10	12	17
Average orchard life at this replanting rate	42	60	60	50	35

ABS data on citrus tree age has been collated[6] since 1983 for Australian Statistical Divisions with significant tree numbers (minor areas removed).

This shows the following National and Regional trends. Note that no data was collected in the 1988 ABS survey and years 1998,1999 and 2000 were not complete census years (small sample only) and should be treated with caution.

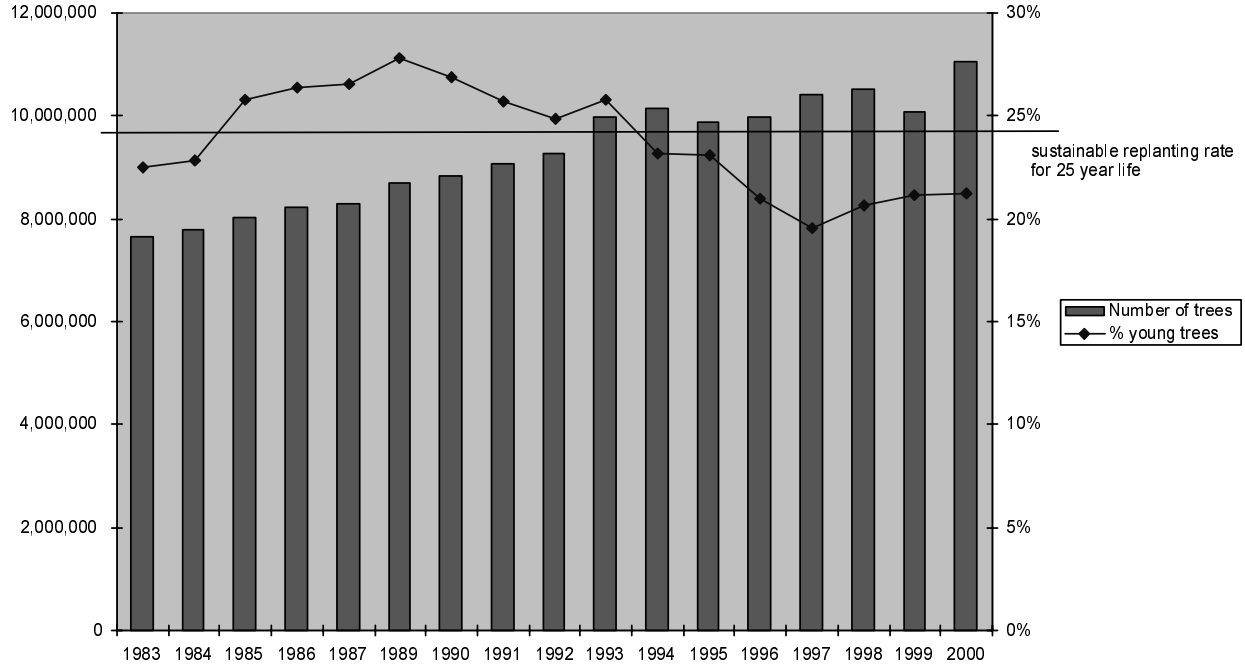
Further Data has been included as an Appendix.

[4] from BizCheck Survey

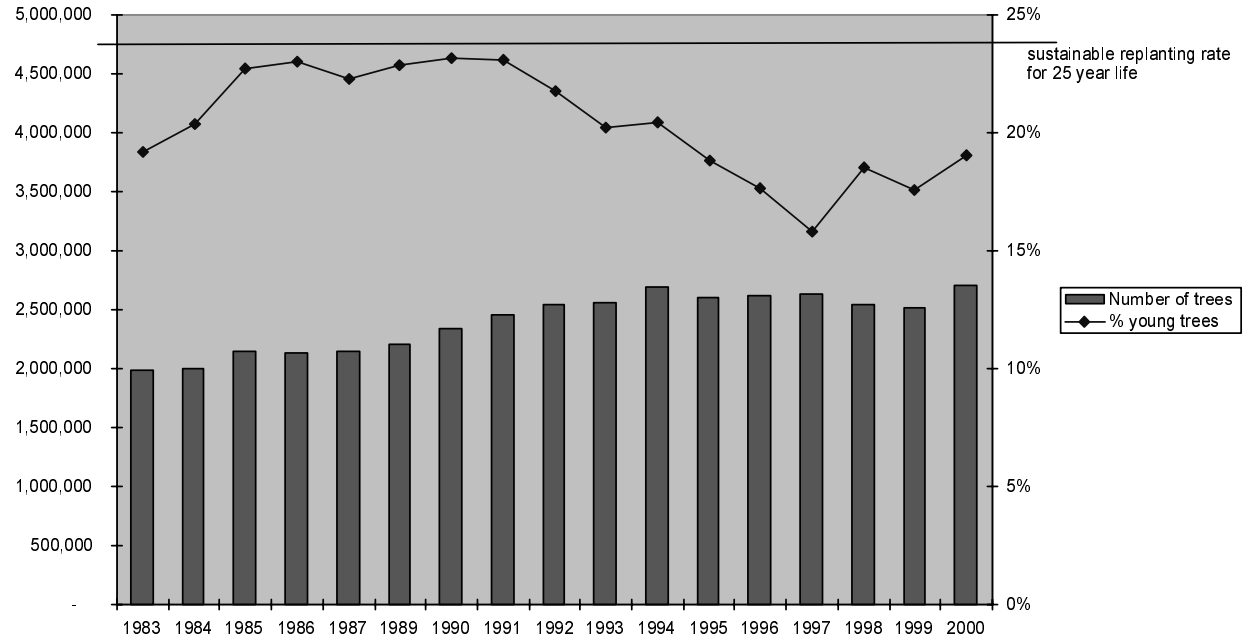
[5] from Cost of Production Survey

The diagrams show that at a nation scale replanting has been below sustainable levels since 1994 onwards and that the Murray Valley has been below sustainable replanting rates for the last 18 years.

National Total number of citrus trees and % young trees over time (1988 missing)



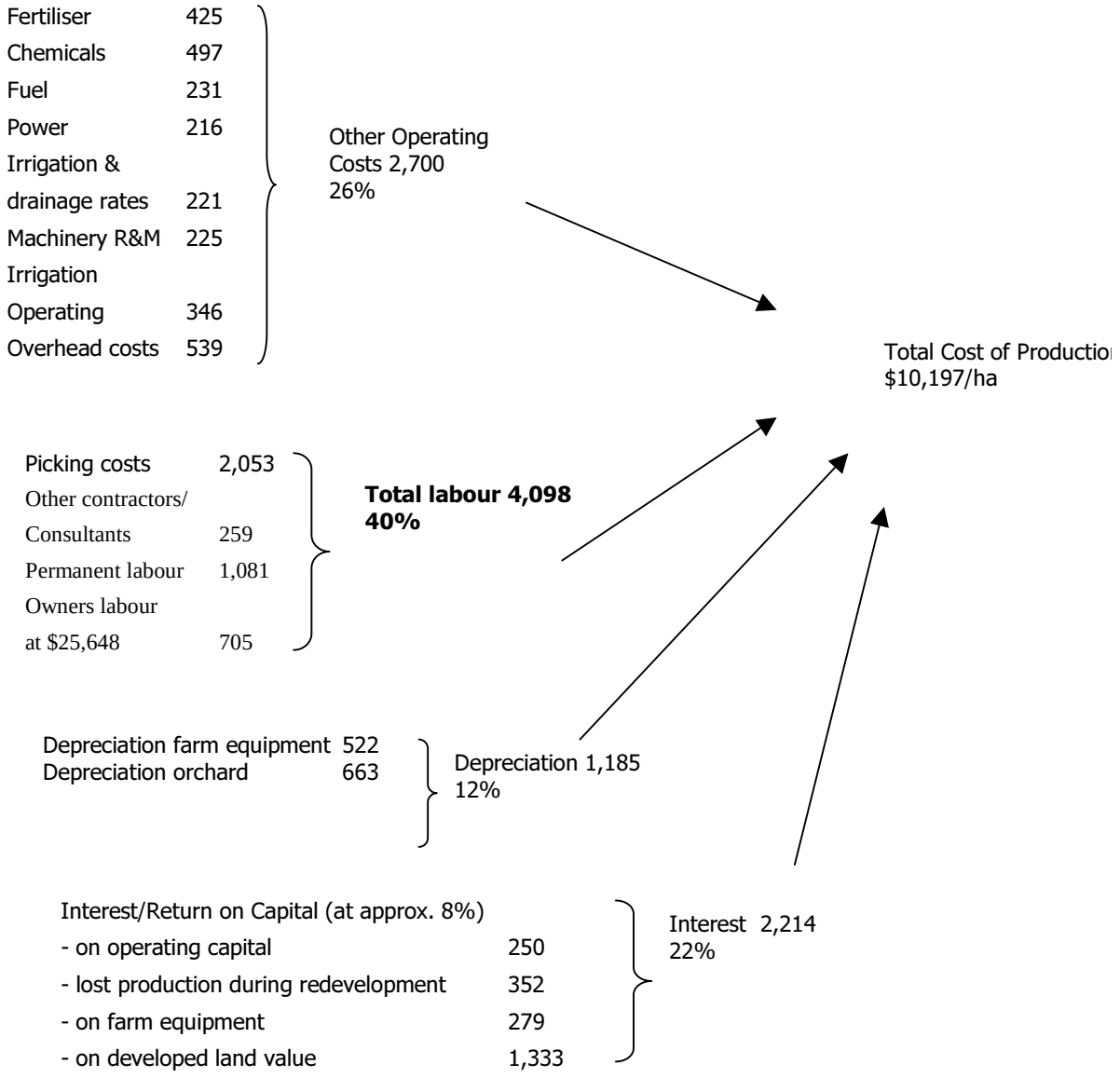
MURRAY VALLEY (Mallee and Murray Statistical Divisions)
Total number of citrus trees and % young trees over time (1988 missing)



CITRUS GROWING IS LABOUR INTENSIVE

The following diagram illustrates the importance of labour in the total cost structure of citrus growing in 1999/2000. Note in this case owners labour has been costed in the total labour cost.

Cost per ha of growing citrus from MVCMB Cost of Production Survey 1999/00



As can be seen labour makes up 40% of the total cost of production.

Clearly effective labour management is critical to success in the citrus industry.

This become even more important as scale of businesses increases (the area managed by the owner).

FUNDING EXPANSION TO MAINTAIN VIABILITY

At average performance the business scale required to support a family and produce enough profit to fund business growth and redevelopment means that gross income must exceed $200,000.

For citrus income of $10,000/ha this means that at least 20 ha are required. More when income is lower (eg Valencias).

The long term trend is that businesses need to double at least every 40 years to maintain viability.

For example the original irrigation district blocks were set up 40-80 years ago and were designed to support one family. It is recognised that families now need at least two or three of the original blocks to provide an equivalent income.

To double in 40 years there must be enough profit to expand the business, on average by 2.5% per year.

Usually this is very 'lumpy' expenditure and occurs when neighboring properties become available or after a series of good years.

The low cash flows in the citrus industry has meant that growers have not had the cash flow to invest in expansion in recent years.

ROOM TO EXPAND IS DIMINISHING

Profitable businesses must have room to economically expand. Expansion in citrus can be constrained by:

- small lot size with high cost infrastructure (particularly in older pumped districts)
- high residential land values
- high cost of building irrigation infrastructure to suitable sites as areas closer to river supplies have already been developed
- inadequate access to drainage
- environmental issues eg within high salinity hazard zones
- uncertainty in land tenure
- distance to water supply.

Historically the growth of the citrus industry was less curtailed by these factors.

Governments have invested in water reform and land and water management strategies in NSW and Victoria that address many of the above issues.

In conclusion an easier path is needed for citrus businesses to expand.

a vision for the future

A healthy citrus industry will have removed the three key impediments to adjustment:

- small scale
- high tree age
- variety mix matching the new market demand.

Our vision is for a citrus industry in the Murray Valley that will be:-

- Environmentally sustainable (irrigation and drainage practices will be sustainable and out integrated pest management systems will be world best practice)
- An average of more than 20 ha of irrigation per orchard and expanding
- An average income per ha of more than $10,000/ha through a mix of plantings/crop types tailored to market risk, soil type and labour management
- Replant at a rate to maintain average orchard life of 25 years
- Expand at an average of 2.5 % per year in size (business growth rather than total industry[7])

[7] Industry would need to establish market growth to achieve overall industry expansion. This may well be possible.

- Labour efficient
- Generate 10% return on capital
- Receive excellent feedback from their customers on market demands and respond accordingly
- Actively adopting new research
- Part of a more streamlined internationally cost competitive supply chain in which there will be fewer larger scale more efficient packaging sheds and better feedback to growers on fruit quality and market demands.

All of the above are consistent with long term industry strategies, but have been impeded by lack of market power and low profitability.

Recommendations

RATIONALE

To a large extent the low level of profitability in the industry is related to high tree age and low property size.

These have come about as a result of Government policy and act as a restraint on the industry's own ability to adjust.

Reducing the proportion of older trees which are not performing while at the same time increasing scale is key to achieving our vision for the citrus industry.

This means small growers choosing to exit the industry or choosing to expand and redevelop.

STRATEGY

Therefore it is recommended that an integrated training and development strategy be developed. This could include:-

1. Individual grower business planning to assess individual business limiting factors and a evaluation of business growth or exit options

2. A farm adjustment package to assist in funding redevelopment of trees and address the issue of old trees in the industry that have arisen as a result of Government policies. This includes top-working as well as replanting.

Top working provided there are healthy rootstocks to work from can provide a faster and lower cost way to achieve full yields than replanting. Equivalent yields being achieved at year 3 when reworked compared to 6 - 7 years for new trees.

3. A farm adjustment package to assist growers in expanding their current holdings and linked with employment training where appropriate

4. A financial exit package for growers choosing to leave agriculture.

The detail of the final recommended strategy will be developed in consultation with other Regional Citrus Groups.

ADVANTAGES AND DISADVANTAGES

The advantages of this strategy are that:

- it is targeted at overcoming the key issues of property size, lag phase and cash flow restrictions that have hampered market adjustment transition
- the business plan component will help ensure replanting rates are compatible with each business's cash flow
- it does not provide any protection for the status quo which has been unsustainable.
- Those exiting the industry provide those choosing to remain with the opportunity for expansion.
- Those remaining are on a growth path for a stronger, more market responsive industry
- The structure of the package has similarities to the precedent set with dairy.

The arguments against this form of intervention could include:

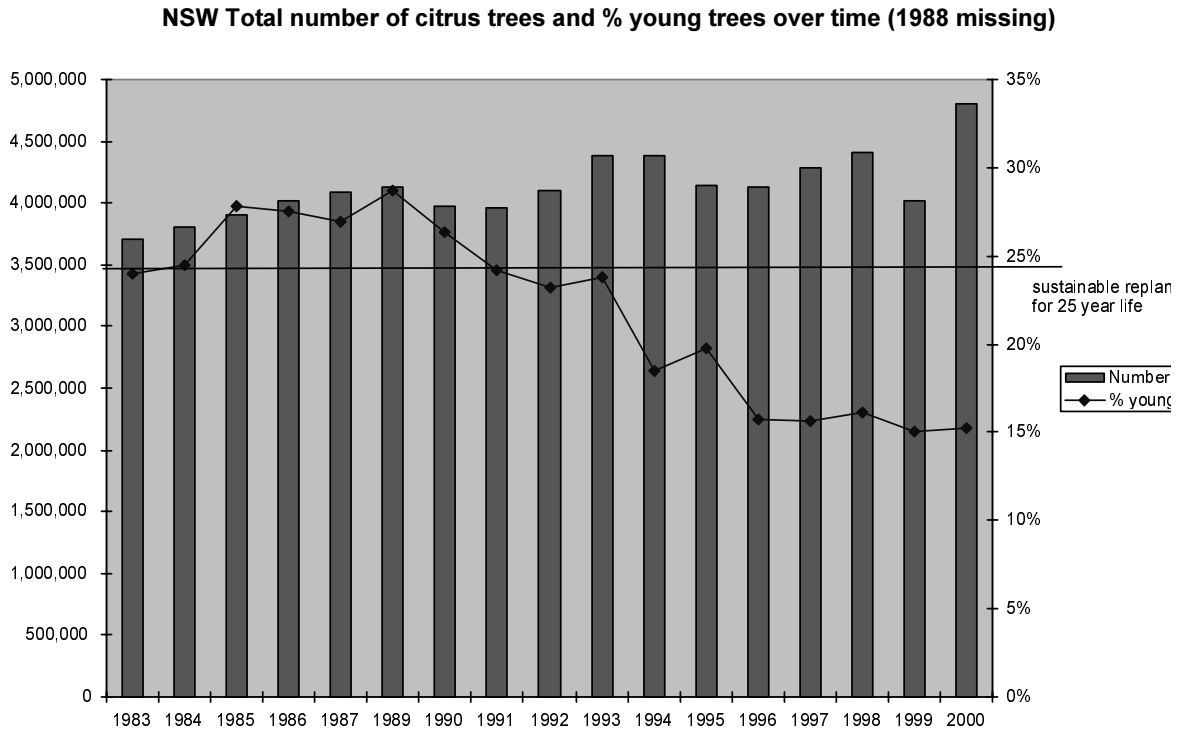
- that government is paying for something that would happen anyway
- those that have previously readjusted miss out
- that it sets a continuing precedent for government bail outs when market forces should decide readjustment rates

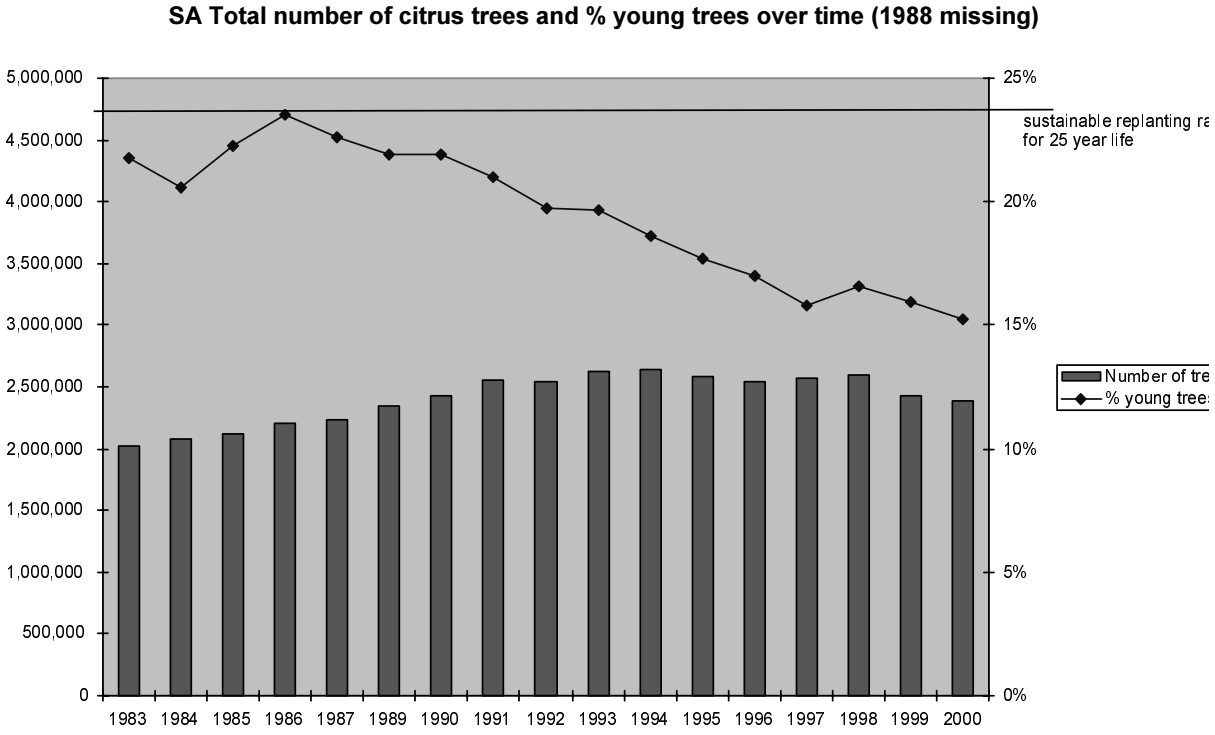
While these are valid arguments they do not recognise the social cost that will continue to be felt in citrus growing communities as a result of older trees and low profitability.

There is also a case that citrus should be treated equitably with other industries who have been deregulated such as the dairy industry.

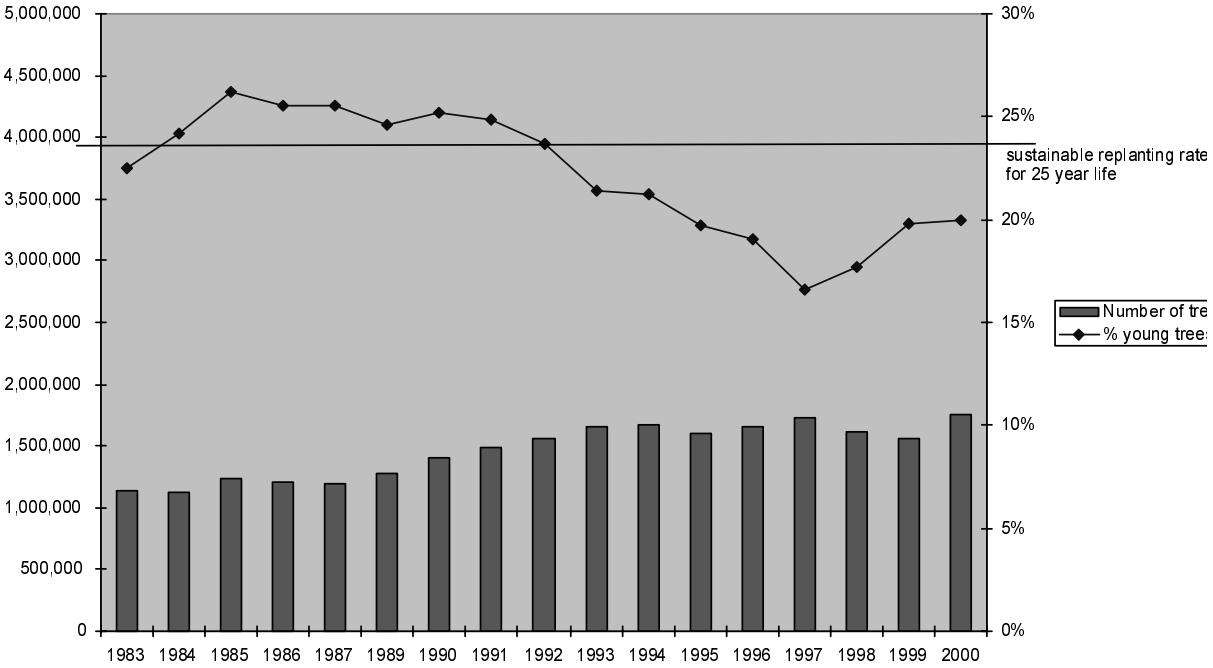
The industry has proven it can perform well on the global market after it has readjusted. This package provides the opportunity for that part of the industry who now cannot afford to readjust to either exit or redevelop and grow within the global market.

appendix A- state Data on trends in tree numbers and tree ages.

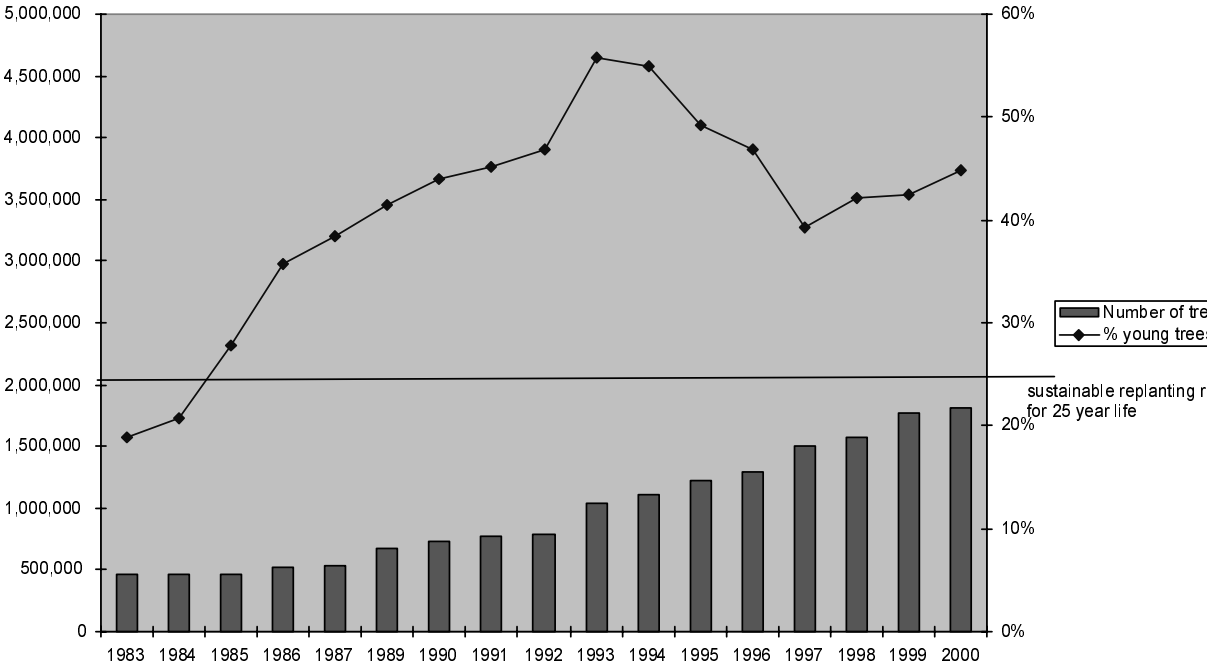


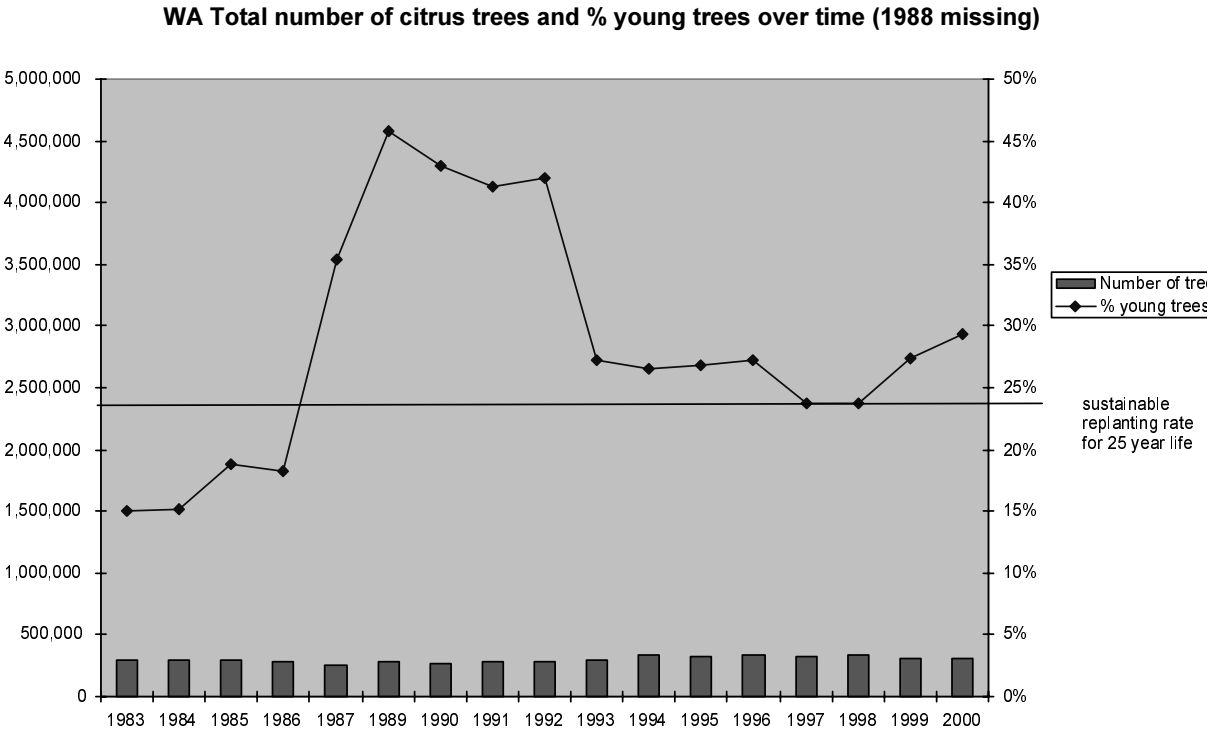


VIC Total number of citrus trees and % young trees over time (1988 missing)



QLD Total number of citrus trees and % young trees over time (1988 missing)




WA Total number of citrus trees and % young trees over time (1988 missing)
5,000,000
4,500,000
4,000,000
3,500,000
3,000,000
2,500,000
2,000,000
1,500,000
1,000,000
500,000
0
50%
45%
40%
35%
30%
25%
20%
15%
10%
5%
0%
1983 1984 1985 1986 1987 1989 1990 1991 1992 1993 1994 1995 1996 1997 1998 1999 2000
Number of tre
% young trees
sustainable
replanting rate
for 25 year life

Appendix B benchmarking survey results

5 year Group Report Medians for Citrus *BizCheck* Results in Murray Valley

			1994/5	1995/6	1996/7	1997/8	1998/9
			median	median	median	median	median
		sample	25	47	43	45	35
A	**The Farm System**						
1	Number households		1.0	1.0	1.0	1.0	1.0
2	***Area irrigated/household***	**ha**	**18**	**26**	**24**	**25**	**23**
3	*Area citrus/household*	ha	15	16	16	16	14
4	% area citrus <6 years old	%	14%	10%	10%	12%	17%
5	% area citrus > 25 years old	%	46%	33%	22%	22%	0%
6	Total Tonnes Citrus sold	T	494	460	513	559	344
7	% of total T citrus sold that is valencias	%	48%	51%	56%	45%	39%
8	% of total T citrus sold that is navels	%	34%	29%	31%	36%	41%
9	% of total T citrus sold that is mandarins	%	6%	4%	3%	2%	3%
10	Average citrus yield	T/ha	27	23	29	29	20
11	Average citrus freshfruit % (low confidence in data)	%	57%	64%	57%	60%	70%
B	**Production Dollars**						
	Farm Income						
12	Average citrus price per T received less packing cost	$/T	184	282	241	203	437
13	Average citrus price per T fresh fruit less packing cost (low confidence)	$/T	256	365	319	292	599
14	Citrus income as % of total farm income	%	89%	70%	65%	69%	54%
15	Total Farm Income (less packing costs)	$	138,635	226,604	219,026	219,182	250,484
16	***Citrus income/ha citrus***	**$/ha**	**4,375**	**6,940**	**6,933**	**6,565**	**9,667**
	Farm costs						
17	Farm Operating Costs (not including packing)	$	92,763	112,715	152,897	154,300	175,569
17.2	Farm Operating Costs / irrigated ha	$	-	-	5,319	8,495	7,445
18	***Farm Operating Costs as a % farm income***	**%**	**64%**	**54%**	**63%**	**71%**	**59%**
	Farm operating surplus						
19	Farm Operating Surplus	$	55,580	81,990	64,130	44,113	95,733
20	Farm Operating Surplus / household	$/h.hold	34,492	74,199	59,000	40,905	91,449
21	Farm Operating Surplus / ML	$/ML	205	322	253	202	356
	Input costs						
22	Electricity cost as % of farm income	%	3%	3%	3%	3%	2%
23	Water & drainage rates cost as % of farm income	%	2%	2%	2%	3%	1%
24	Pest & disease management as % of farm income	%	4%	4%	5%	4%	5%
25	Fuel cost as % of farm income	%	3%	2%	2%	2%	1%
26	Repairs of Machinery as % farm income	%	5%	3%	5%	5%	2%
27	Fertiliser as % of farm income	%	5%	3%	3%	4%	3%
28	***Labour as a % of farm income***	**%**	**27%**	**18%**	**18%**	**23%**	**15%**
C	**Capital Performance**						
29	Return on farm capital (after orchard depreciation at $600/ha/yr)	%	0%	3%	2%	0%	4%
30	Value of farm / household	$/h.hold	525,000	613,300	600,000	609,150	814,412
31	***Debt as a ratio of farm income***	**ratio**	**0.3**	**0.4**	**0.4**	**0.4**	**0.4**
32	Financing costs as % of farm income	%	6%	3%	4%	6%	6%
33	Farm equity %	%	93%	90%	88%	88%	90%
34	***Farm machinery clearing sale value as a ratio of farm income***	**ratio**	**0.4**	**0.3**	**0.3**	**0.3**	**0.3**
D	**Viability**						
35	**Net worth/household**	**$/h.hold**	**465,000**	**601,000**	**543,600**	**560,715**	**677,673**
36.1	Farm profit/ household (after orch. Deprec.)	$/h.hold	-	-	32,199	20,189	43,429
36	***Net non-farm income / household***	**$/h.hold**	**8,490**	**11,000**	**6,667**	**7,031**	**15,000**
37	Disposable Income / household	$/h.hold	45,862	75,756	48,115	35,668	81,742
38	***Disposable Income / household (after orchard depreciation)***	**$/h.hold**	**36,862**	**64,474**	**41,700**	**25,567**	**70,333**
39	+/- Change to DI./h.hold if price changes +/-10%	+/- $/h.hold	5,503	11,423	11,134	10,341	13,405
E	**Lifestyle**						
40	Days holiday a year per household	days/yr	14	19	28	21	-
41	Days spent on training per adult	days/yr	5	8	10	10	-
F	**Resource Sustainability**						
42	Water use - ML/ha for each ha irrigated	ML/ha	9	10	10	11	10

The table below illustrates the cost of production trends over 5 years in the Murray Valley sample.

Enterprise Profit Factors	Murray Valley 1995/6	Murray Valley 1996/7	Murray Valley 1997/8	Murray Valley 1998/9	Murray Valley 1999/0
Sample size	27	51	45	32	32
Price - Valencias **Actual Yield - Valencias** **Actual Income - Valencias**		$143/t 42 t/ha $5,937/ha	$130/t 40 t/ha $5,154/ha	$278/t 30t/ha $8,210	$205/t 38t/ha $7,703
Price - Navels **Actual Yield - Navels** **Actual Income - Navels**		$425/t 23 t/ha $9,650/ha	$309/t 34t/ha $8,413	$650/t 16t/ha $10,653	$596 21t/ha $10,885
Equivalent Price - Valencias & Navels **Income - Valencias & Navels**	$260/t $5,641/ha	$233/t $6,931/ha	$202/t $6,354/ha	$430/t $9,800/ha	$391/t $11,355
Variable costs	$3,318/ha $153/t	$4,136/ha $139/t	$4,289/ha $136/t	$5,264/ha $230/t	$5,554/ha $192/t
Overhead costs	$1080/ha $50/t	$910/ha $31/t	$667/ha $21/t	$451/ha $20/t	$539/ha $19/t
Capital costs **(includes return on capital)**	$2,648/ha $122/t	$2,238/ha $75/t	$2,717/ha $86/t	$3,300/ha $144/t	$3,400/ha $117/t
Owner's labour	$1,093/ha $50/t	$467/ha $16/t	$550/ha $17/t	$690/ha $30/t	$705/ha $24/t
Total expenditure	$8,141/ha $375/t	$7,754/ha $260/t	$8,221/ha $260/t	$9,706/ha $425/t	$10,197/ha $352/t
Profit	-2,501/ha -$115/t	-$820/ha -$28/t	-$1,867/ha -$59/t	$123/ha $+5/t	$+1,157/ha $+40/t

(Some figures have been rounded and there has been a change in sample of growers since 1995/6). Note prices in 2000/01 are expected to be lower due to quality problems with navels (which also affected returns for the USA) and very low prices for valencias both domestically and on the export market. Therefore the apparent improving profitability in the last two years will certainly be reversed in 2000/01. But 2001/02 appears better.