

Rural and Regional Affairs and Transport Legislation Committee

ANSWERS TO QUESTIONS ON NOTICE

Additional Estimates February 2016

Agriculture and Water Resources

Question: 122

Division/Agency: Cotton Research and Development Corporation (CRDC)

Topic: Implications of the job losses in CSIRO

Proof Hansard page: 36

Senator CAMERON asked:

Senator CAMERON: Scientific fact. So what have been the implications of the job losses in CSIRO for your collaboration, especially in the recent announcement of over 300 in the climate change area?

Mr Finney: At this stage we are awaiting communication. We have had some initial communication from CSIRO about the announcement, obviously. But we are still to have a conversation about implications for our specific cotton research. We have had no impact from previous changes in CSIRO strategy and we have been very positive to the focus on innovation and commercialisation of research outcomes for the benefit of industry. We think that offers a lot of complementary benefits to what we already do in rural R&D.

Senator CAMERON: So have you approached CSIRO as to what the implications are?

Mr Finney: I have already received a communique from them saying that they will be in touch with us soon to discuss the changes.

Senator CAMERON: Can you table that communique?

Mr Finney: It was an email. I can, if you wish.

Senator CAMERON: Okay. That would be good. You can do that on notice.

Mr Finney: Sure.

Answer:

Cotton Research and Development Corporation

The email communique:

Question: 122 (Continued)

John.Manners@csiro.au

 You replied to this message on 10/02/2016 3:06 PM.

Sent: Fri 5/02/2016 10:25 AM

To: Bruce Finney

Thanks Bruce, I have forwarded this to Mark and Andrew for action.

You may have seen in the media that there are changes happening in CSIRO. We are working through what this means for us in Agriculture. I will brief you once we have formulated our actions.

John

Rural and Regional Affairs and Transport Legislation Committee

ANSWERS TO QUESTIONS ON NOTICE

Additional Estimates February 2016

Agriculture and Water Resources

Question: 123

Division/Agency: Cotton Research and Development Corporation (CRDC)

Topic: Statistics on total factor of productivity for the cotton industry

Proof Hansard page: 37

Senator CAMERON asked:

Senator CAMERON: Can you provide the current statistics on your total factor productivity for the cotton industry?

Mr Finney: Yes.

Senator CAMERON: Do you have them now or will you take that on notice?

Mr Finney: I will take that on notice.

Answer:

Cotton Research and Development Corporation

The CRDC is not aware of any analysis of total factor productivity (output/input) for the cotton industry. The CRDC monitors productivity growth (output) and profitability trends (gross margin) through benchmarking since 1997. Please refer to the attached pre-publication version of the Australian Cotton Comparative Analysis (Attachment A).

AUSTRALIAN COTTON COMPARATIVE ANALYSIS

2015 CROP



Australian Government
Cotton Research and
Development Corporation



Knowledge. Insight. Experience.

© Cotton Research and Development Corporation June 2014

ISBN 978-0-9923758-7-4

This work is copyright. Apart from any use permitted under the Copyright Act, 1968, no part may be reproduced by any process without the written permission of Cotton Research and Development Corporation.

Cotton Research and Development Corporation

2 Lloyd St (PO Box 282)

Narrabri NSW 2390

ABN 71 054 238 316

Executive Director: Bruce Finney
R & D Investment: Ian Taylor
Business & Finance: Graeme Tolson
Telephone: 02 6792 4088
Facsimile: 02 6792 4400
Email: crdc@crdc.com.au
Website: www.crdc.com.au

Boyce Chartered Accountants

Moree	David Newnham	02 6752 7799	dnewnham@boyceca.com
	Paul Fisher	02 6752 7799	pfisher@boyceca.com
	Phil Alchin	02 6752 7799	palchin@boyceca.com
Cooma	Jonathan Forrest	02 6452 3344	jforrest@boyceca.com
Dubbo	Bernard Kennedy	02 6884 6499	bkennedy@boyceca.com
	Scott Christian	02 6884 6499	schristian@boyceca.com
	Caroline Wilcher	02 6884 6499	cwilcher@boyceca.com
	Mike Nangle	02 6884 6499	mnangle@boyceca.com
Goulburn	Peter King	02 4821 1466	pking@boyceca.com
Wagga Wagga	Simon Sellars	02 6971 0600	ssellars@boyceca.com
	Linda Mackellar	02 6971 0600	lmackellar@boyceca.com

Images courtesy of Cotton Australia

Dear Grower,

We are pleased to present the 2015 Australian Cotton Comparative Analysis.

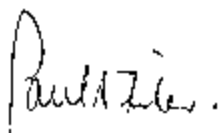
The Comparative Analysis is a joint initiative between the Cotton Research & Development Corporation (CRDC) and Boyce Chartered Accountants to produce the industry benchmark for the economics of cotton growing in Australia.

The sample of participants this year again captures a representation from the different cotton-growing valleys. It is always our aim to increase the sample size of the analysis. If you are a grower and find this report instructive but do not currently participate in the analysis, we would welcome your involvement. Participation is free, and while we know that involvement does take some effort, we believe that this effort leads to a greater understanding of the numbers that drive your business with respect to other growers and trends within the industry.

Whilst the report focuses on the 2015 crop, it also presents trends that have been measured against more than ten years of data.

The report has been posted on the websites of Boyce Chartered Accountants (www.boyceca.com) and CRDC (www.crdc.com.au). We welcome use of the figures contained in this report, however it should be noted that the report or any part of it may not be published or reproduced without authorisation.

We look forward to discussing the report with you.



Paul Fisher
Director
Boyce Chartered Accountants
Moree



Bruce Finney
Executive Director
CRDC
Narrabri



2015 AUSTRALIAN COTTON COMPARATIVE ANALYSIS

CONTENTS

1	INTRODUCTION	X
2	REPORT ON THE 2015 CROP	X
	2.1 ANALYTICAL REVIEW	X
	2.1.1 Introduction	
	2.1.2 Key performance indicators	
	2.1.3 Five year averages to 2015	
	2.1.4 Other observations	
	2.1.5 Features of the Top performers	
	2.2 RETURN ON ASSETS	X
	2.2.1 What return on assets am I getting?	
	2.2.2 Why measure ROA?	
	2.3 CONCLUSION	X
3	COMPARATIVE STATISTICS	X
	3.1 PARTICIPANTS	X
	3.1.1 Comparison of average income and expense items for the 2015 year	
	3.2 AVERAGE	X
	3.2.1 Graphs	
	3.2.1.1 Comparison of average income and expense items	
	3.2.1.2 Yield and trendline for the Average landholders	
	3.2.1.3 Value per bale and trendline for the Average landholders	
	3.2.2 Comparison of average income and expense items for the past ten years	
	3.2.3 Comparison of average results between the 2015 and 2014 year	
	3.2.4 Comparison of the Average of the different valleys	
	3.3 TOP 20% FARMERS	X
	3.3.1 Graphs	
	3.3.1.1 Comparison of Top 20% income and expense items	
	3.3.1.2 Comparison of the yield for the Average and the Top 20%	
	3.3.1.3 Comparison of the value per bale for the Average and the Top 20%	
	3.3.1.4 Comparison of the operating profit for the Average and the Top 20%	
	3.3.1.5 Comparison of the net farm profit/(loss) for the Average and the Top 20%	
	3.3.2 The past ten years	
	3.4 FIVE YEAR AVERAGE FOR TOP 20% AND AVERAGE PARTICIPANTS	X
	3.5 LOW COST FARMERS	X
	3.5.1 Graph – Comparison of yield for low cost and average	
	3.5.2 The past ten years	
4	APPENDICES	X
	Appendix A – Definition of terms	
	Appendix B – Guide to income and expense allocations	
	Appendix C – Table on assessability of cotton proceeds	
	Appendix D – Common sharefarming and leasing arrangements	

1

Introduction



INTRODUCTION

The 2015 Australian Cotton Comparative Analysis (ACCA) is the eleventh report produced by Boyce Chartered Accountants in conjunction with the Cotton Research & Development Corporation (CRDC). From 1986 to 2004 the report was compiled independently by Boyce.

In this report we present an analytical review of the 2015 results, a comparison with prior years, and comments on emerging trends.

The primary purpose of the ACCA is to show the income and expenses associated with growing fully irrigated cotton on a per hectare basis. There are some provisos however to be aware of when considering information contained in this report:

- It is important to note that the analysis does not necessarily show the health of the cotton industry. Where a cotton grower grew skip row cotton or solid cotton that did not receive full water, or grew no fully irrigated cotton at all, those resulting figures are excluded from the analysis. In most, if not all cases, these alternate crops would have returned a reduced profit per hectare in comparison to growing fully irrigated cotton. Therefore, although the grower may have made a healthy per hectare profit on the hectares of fully irrigated solid cotton grown, the net profit of the total farm would have been significantly less than if fully irrigated cotton was grown across the full area, allowing for usual rotation practice.
- Readers of this study should be aware that these figures show the average results of participants in the sample. It is important that users understand this fully. For example, assume there were only two participants in the sample growing the same area. If one uses contractors for picking and the other owns their own pickers, the figure for contract picking will be approximately 50% of the market rate. Similarly, the figures on a per line basis for expenses such as depreciation, repairs and maintenance, wages etc. will all be less than market rates. With this knowledge, users of this information can get additional information from this analysis.
- It should be remembered that if there is a significant change in per line figures, this may not necessarily be due to price increase. Line items can be made up of price, frequency of operation and volume per operation. So where there has been an increase in, for example seed, this could be due to price, number of seeds per metre planted or the number of plantings, or a combination of all three.
- It is important to understand that where a crop has not been picked due to flooding or some other disaster other than hail, the expenses relating to the affected area have been excluded from the sample. This is worth noting given the extent of flooding this season.

So care should be taken when using the results from this analysis. Understanding the basis on which the analysis is constructed is the key to getting the most out of its study.

OUR SAMPLE

The analysis includes the results for farmers who were able to plant, grow and pick their crop using close to normal irrigation practices. This year the total number of hectares in the sample decreased due to a decrease in the availability of water throughout many of the cotton growing areas of Australia.

There has been an increase in participants from the southern valleys as the industry continues to expand in those areas.

The average hectares planted per participant decreased from 1,593 hectares in 2014 to 926 hectares in 2015. This is due to water availability and participants in the analysis changing. The total number of bales in the sample was just on 340,000, which is approximately 15% of total Australian cotton production. Final estimates for the 2015 Australian crop were 197,000 hectares and production of 2,200,000 bales as at January 2016 (Cotton Australia Statistics).

Marketing is an important part of management and can make a significant contribution to the profitability of the cotton farm. For this reason, participants' overall results in the 'Comparison of average income and expense items' are not normalised in respect of income. Whilst recognising marketing as an important part of management, our study does not include or exclude growers from the Top 20% Group based on marketing decisions in respect of currency, lint and basis. Our view is that growers should be classified into (or out of) this group based on yield and cost only, as many growers review their operation against the Top 20% Group to look for areas of improvement. We have therefore selected the Top 20% using a substituted price of \$517 per bale (the average 2015 net price for all participants) instead of using the actual average net price that the individual grower actually received.

Although the average price was used to select the participants in the Top 20% Group, the growers' actual sales figures (including marketing) are reported in this analysis.

THE NEED TO BENCHMARK

Financial analysis using comparative statistics helps farmers identify relative strengths and weaknesses; accompanying budgets and long term business plans will then focus on ways to overcome weaknesses and build on strengths. In other words, this Comparative Analysis is a management tool to implement change and to identify where effort should be directed on a day to day basis.

Obviously, this analysis does not provide all the answers – it is a benchmark or a standard to strive for. It is up to management to develop and implement specific action plans based on improved knowledge to set and achieve new goals.

The reliable, independent figures in the Comparative Analysis provide the starting point for farmers to develop "best practice".

If growers or other interested parties require more long term data, note that this analysis has been running (on much the same basis as it is today) since 1986.

We encourage participants to discuss the results with us and to clarify any queries so that we all develop a deeper understanding of the industry.

2

Report on
the 2015 Crop



2 REPORT ON THE 2015 CROP

2.1 ANALYTICAL REVIEW

2.1.1 INTRODUCTION

The 2015 year was generally an ideal irrigated cotton season in terms of weather. Enough heat, rainfall at ideal times with little prolonged cloud and low cold shock days all contributed to a very kind season for growers. The general rain over Eastern Australia towards the end of December was welcome.

In summary, the 2015 growing season will be remembered for the following;

- Reduced plantings due to minimal stored water;
- Water budgeting continuing to be difficult;
- General rain at the end of December; and
- Good quality cotton and low discounts.

With reduced areas planted and grown, overheads are once again spread over reduced hectares, increasing cost per hectare.

Significant lifts in yield, water availability and the growth of cotton area in the Southern Valleys are the big stories in the industry.

In prior years' analyses we have reviewed the impact on profit of lack of stored water. While this may be self-evident, there are also less visible impacts, such as the reduced time available for a grower to price a crop. Usually it is considered prudent to forward sell a crop only when production is relatively certain. In the case of irrigated cotton, this would be when there is available water in storage. With little water in storage, the ability to forward sell (say for a period of three years) would be limited which would, in turn, limit the ability to obtain an excellent price. So lack of water and consequently production is reducing the ability of growers to **take advantage of higher prices in the three years prior to production.**

While most valleys are facing reduced and variable plantings, the Riverina is looking at more stable production. The industry continues to gain momentum in that valley, with many first time growers and other irrigators analysing the profitability of cotton versus other irrigated crops. It is important that these analyses with respect to other crops are carried out in a 'like for like' manner. Inevitably, growers from other established valleys look to the emerging area and compare it to other valleys. On the face of it, the price of what could be termed a 'reliable megalitre' of general security water is cheap in relation to other, more established valleys. There is, of course, more to the analysis than that.

Although there was a wet pick in 2014, we have not seen compaction issues manifest in the 2015 crop, mainly due to rotation.

The 2016 production is estimated at 2.4 million bales on plantings of 270,000 hectares (Cotton Australia Statistics). The ongoing business question here is one of trying to grow similar hectares each year versus maximising yearly production when the water is there.

Discounts due to lint quality were lower this year, due to prolonged dry conditions over the picking period and reduced heatwave conditions.

For the Average Group:

- Yield (12.59 bales per hectare) increased by over 2 bales from the previous year (10.24 bales per hectare) and is just on 2 bales per hectare greater than the five year average.
- Price achieved per bale was \$517 per bale which was \$31 above the five year average.
- The resulting total income was \$1,285 higher than the five year average and \$1,621 higher than the 2014 year.
- Fertiliser and Fuel costs continue to hold at around \$480 and \$377 per hectare respectively, with Chemicals – Defoliants and Chemicals – Insecticides up this year compared to 2014.

For the Average Group, this was a great season, with profit per hectare of \$1,899 being better than 2014 (\$711) and greater than the five year average. Based on these figures, a yield of 8.99 bales per hectare is required to cover total expenses.

For the Top 20% Group:

- Average yield was 14.31 bales per hectare, an increase of over 2.5 bales per hectare from the previous year (2014: 11.55 bales per hectare).
- This group achieved an average price of \$537, which is \$53 up from 2014 and \$47 above the five year average.
- This group continues to grow more cotton (1.7 bales per hectare) than the Average Group and do it more cheaply (\$4,062 v \$4,363).

It was also an excellent season for the Top 20% Group, with profit of \$3,388 per hectare compared to a five year average of around \$2,190. This result was a combination of a huge jump in yield, a great price but with increased expenses. It would be worthwhile to further analyse the increase in costs excluding costs directly associated with the increase in yield.

The big jump in average yield this year with respect to 2014 will reinforce the upward trend for yield in the industry.

In our view, the main focus for growers has to be the low cost options that have the biggest impact on the bottom line. While this may be self-evident, it deserves some serious structured and documented thought by the industry.

This study has continually shown that being in the Top 20% is predominately driven by yield. 'How can I improve yield as cheaply as possible?' should be a well-considered question, and one which has been raised before. Specifically though, in this 2015 year, if you look at the increase in expenses that was not specifically driven by yield, how much of that contributed to yield? We believe this question requires some detailed analysis by all growers.

The industry continues to be an early adopter of technology. At the industry level, this is a tremendous positive as it shows the innovation that has driven the industry. However, from a profit perspective, individual growers need to know where their profit comes from, as the early adoption of technology at the micro-level is not always conducive with maximising profit. We believe each technology adoption needs to be framed initially around ongoing cost minimisation or yield maximisation, and secondly from the point of view of the initial capital cost and other benefits. This equation needs to be kept in perspective but the answer could be different for each grower.

The cost of Chipping continues to reduce such that it is now a negligible expense. Similarly, the use of old picking technology continues to decrease. The reduction in License Fee – Bollgard indicates a significant decrease in the amount of Bollgard cotton grown in 2015. In our view growers are ‘hedging their bets’ with growing less Bollgard, while others continue to grow 100% Bollgard in the main because it’s easy. This is the great thing about analysing an industry over time, with some costs phasing out over time and others changing very quickly. We recommend that growers spend some time thinking about where the industry is headed in an attempt to be ahead of the game in the two main areas that impact profit – maximising yields and ensuring costs are at a minimum.

This year we have again included trend lines in some of the graphs presented. Some interesting trends from 1997 to 2015 have emerged, including:

- The value per bale continues to increase slightly, although we have seen no real growth.
- The trendline in growth of cost per hectare continues to rise. This is partly driven by yield increase, partly by a smaller percentage of the farm being used to grow cotton and partly by pure increase in cost.
- The yield per hectare, which up to 2014 was increasing at a reduced rate, has increased significantly in 2015, pushing the trendline upwards.
- This years’ significant increase in operating profit per hectare for the Average Group and the Top 20% Group has also pushed this trendline up, from a flatter position to 2014. This impact was more pronounced for the Top 20% Group.

The two statistics of relatively static price per bale and increasing costs per unit of inputs acquired confirm the decreasing terms of trade for the industry. Therefore the pressure is on the grower to continually lift production across the full area grown.

Five Year Average (2011 to 2015)

We believe the message of the average for a number of years is important. In this report we have used the average of this season and the past four seasons – five years in total.

In previous reports we have sometimes used less years for the average to try and reduce the impact of drought on the numbers.

What we are attempting to show by the five year average is the income and expenses on a per hectare basis in a 'normal' year.

2.1.2 KEY PERFORMANCE INDICATORS

2.1.2.1 YIELD (BALES / HA)

	<u>AVERAGE</u>	<u>TOP 20%</u>	<u>DIFF</u>
2015	12.59	14.31	1.72
2014	10.24	11.55	1.31
2013	10.69	11.99	1.30
2012	9.71	11.45	1.74
2011	10.04	11.12	1.08
* Five year average	10.65	12.08	1.43



What is your water use efficiency in terms of bales per megalitre?
 Do your employees know your yield expectations?
 Have you reviewed your strategies depending on the availability of water?
 What was your maximum yield in a field and do you know why the other fields or areas did not perform as well?

2.1.2.2 VALUE (\$ / BALE) (LINT AND SEED LESS GINNING AND LEVIES)

	<u>AVERAGE</u>	<u>TOP 20%</u>	<u>DIFF</u>
2015	\$517	\$538	\$21
2014	\$473	\$485	\$12
2013	\$427	\$445	\$18
2012	\$486	\$478	(\$8)
2011	\$526	\$508	(\$18)
* Five year average	\$486	\$491	\$5

- The lint price was between \$410 and \$480/bale in the first half of the growing season, peaking at around \$550 per bale around February. The price then slipped away to below \$500 in May.
- The average lint price for the growing period was just on \$480 per bale. (Data provided by Independent Commodity Management)
- The price of seed had a significant impact on the 2015 result. The average price per tonne was around \$90 in 2015 versus a five year average of just on \$60 per tonne.



What strategies do you have in place to combat adverse currency and futures?
 How much cotton have you sold for the 2016 and 2017 crops?
 How do you forward market when there is some water security?
 Do you understand all the strategies that are available?
 Has the worry and risk of your marketing strategy been worth the benefit you have gained?
 Have we seen a change in the way cotton is marketed?

2.1.2.3 OPERATING COSTS (\$ / HA)

	<u>AVERAGE</u>	<u>TOP 20%</u>	<u>DIFF</u>
2015	\$4,363	\$4,062	\$301
2014	\$3,918	\$3,766	\$152
2013	\$3,808	\$3,371	\$437
2012	\$3,601	\$3,524	\$77
2011	\$3,472	\$3,137	\$335
* Five year average	\$3,832	\$3,572	\$260

- The costs for the Average Group increased on the previous year by \$445/ha, which is significant. The only direct costs that decreased in 2015 compared to 2014 were Contract Picking, Fertiliser and License Fees – Bollgard. The biggest increases in direct costs were seen in Seed, Electricity, Chemicals – Insecticides and Water Charges and Purchases.
- There was a large range with the operating costs varying between \$3,022/ha and over \$6,000/ha.
- The average operating costs for the 'Low Cost Growers' was \$3,643 compared to \$3,562/ha in 2014.



What steps can you take in a “normal year” to keep your operating costs below \$3,700/ha?
 Are you monitoring the costs which are much higher than the average?
 Have you investigated group purchasing arrangements?
 Does your strategy in relation to fixed costs need to change to minimise losses in low water years?
 Should you be using more contractors so that in low water years you don't have the fixed costs?

2.1.2.4 COST OF PRODUCTION (\$ / BALE)

	AVERAGE	TOP 20%	DIFF
2015	\$347	\$284	\$63
2014	\$382	\$326	\$56
2013	\$356	\$281	\$75
2012	\$371	\$308	\$63
2011	\$346	\$282	\$64
* Five year average	\$360	\$296	\$64

- A low cost of production per bale (driven by higher yields) is the most significant feature of the Top 20%. This is achieved by producing more bales of cotton from a lower cost base. In the 2015 year this was achieved by the Top 20% as they grew a higher yield per hectare (14.31 bales/ha) and mostly grew cotton on a larger area of their farm. This enabled them to spread the fixed and semi fixed costs over a greater area.
- Long-term average figures for the top producers prove that it is possible to achieve a benchmark cost of production in the \$290 to \$350/bale range in a “normal” year.
- With the extra yield of 0.25 - 0.5 bales per hectare, costs change very little.



Are you continually focusing on your cost of production per bale?
 What are the Top 20% doing different to you?

2.1.2.5 COMPARISON OF VALLEYS

	Gwydir	Barwon/Mcintyre	Macquarie	Namoi	SouthernValleys
Gross income (\$/ha)	\$7,263	\$6,064	\$6,868	\$5,759	\$6,122
Operating costs (\$/ha)	\$4,305	\$3,922	\$5,444	\$6,033	\$4,201
Operating profit (\$/bale)	\$219	\$179	\$110	(\$25)	\$157
Hectares grown	1,382	491	291	538	1,789
Yield/ha	13.49	11.97	12.96	11.12	12.27

- This is the first year we have included specific numbers for the Southern Valleys.
- The sample size this year for other valleys was not large enough to be included separately in this years' analysis.

2.1.3 FIVE YEAR AVERAGES

As noted in the introduction, we believe (in normal years) the message of the five year average is important. The table below compares the five year average figures for the Average Group and the Top 20% Group.

What makes the Top 20% Group so much better than Average Group?

In the five selected years, the Top 20% Group made around 100% more profit (after interest) than the Average Group (\$2,190/ha compared to \$1077/ha).

Land productivity (yield/ha)	64%	or	\$713
Price	5%	or	\$51
Hail insurance claims	5%	or	\$60
Direct cost savings – excluding Wages – Proprietors	23%	or	\$256
Interest savings (less debt)	3%	or	\$35
	100%		\$1,114

The message from these figures is that better land productivity (measured by higher yields) is overwhelmingly the major feature of the Top performers. Farmers should concentrate on growing higher yield within a realistic cost framework rather than searching for dramatic cost cutting measures if they wish to improve their performance significantly.

2.1.4 OTHER OBSERVATIONS

Over the years, many 'rules of thumb' have been developed and quoted by farmers, financiers and accountants:

- Cotton farmers are in principle debt free if, at year-end, their equity in cotton pools and any cotton unsold covers their total borrowings.
- The contingent tax liability associated with crop proceeds tipped forward (on hand and in pools) should always be calculated and bought to account at year- end when measuring your wealth.
- Debt in the industry is becoming more of an issue. Even with interest rates at historically low levels, interest cost per hectare is significant. To overlay current debt with rates of 10 or 12% would have significant impact on the industry. It is difficult to continue with old 'rules of thumb' such as debt should not exceed 150% of average gross farm income (100% when interest rates are above 12%), when profitability is really the key.
- High wage costs and machinery horsepower are a quick indicator of overall high costs of operations.
- Don't underestimate the value of knowledge, within your industry and worldwide. It can be difficult to keep up to date on the latest practices, but falling behind can cost you money.
- Because of the high fixed and semi fixed costs in this industry, it is becoming increasingly important to be able to grow enough area every year to cover these costs.

2.1.5 FEATURES OF THE TOP PERFORMERS

Over the past fifteen years many cotton farmers have been able to achieve top-class results, even in years when seasonal or financial circumstances were less than favourable.

Outlined below are some of the distinguishing characteristics and features of successful cotton growers:

- **Controlled operating costs**

Operating costs (before interest) for farmers have averaged \$3,572/ha for the past five years. With fine-tuning, the best farmers have been able to keep their operating costs under control without sacrificing yield and still adequately maintaining all assets.

The performance of the 'Low Cost' farmers operating at their optimum scale over the past five years proves that a target for operating costs of \$3,000 to \$3,300/ha is achievable in a normal year. These figures translate to operating costs of \$300 to \$330/bale.

- **Consistent marketing strategies**

There are a large number of marketing alternatives available to cotton farmers. The strategies adopted by individual farmers depend on:

- Individual outlook on risk
- World-wide economic outlook
- Taxation implications
- Cash flow implications
- Water availability
- Level of knowledge on how to use the complex alternatives

To date, the perfect marketing strategy has proved to be elusive. Farmers need to make marketing decisions with the aim of maximising their crop income, keeping production risk in mind and remembering that a net return in excess of \$485/bale should produce a sizeable profit.

In our opinion, the application of consistent marketing strategies on a year in year out basis is the key to maximising per bale prices in the longer term.

The top farmers know their cost of production per bale. They then base marketing decisions on that cost.

- **Productive labour**

Top-class results cannot be produced without having a top-class team of employees who are efficient, focused, motivated and stable.

The best farms ensure that employees are kept informed, are trained to do their job properly, given responsibility and an opportunity to participate in on-farm decision making. It is also essential that employees are properly remunerated and take their holidays every year. The most efficient farms are operating with one permanent person for every 285 hectares.

- **Reliable machinery**

All good farmers appreciate the importance of timing and so ensure that they own or have access to sufficient reliable machinery to carry out all operations efficiently and on time. For farmers who decide to own tractors to carry out all field operations, capacity of 350 to 400 engine horsepower per 500 hectares is generally required.

The ideal picking capacity for farms is subject to a great deal of debate with many efficient operators concluding that the whole picking operation should be carried out by contractors. The best farmers aim to complete their picking operation within 30 days.

- **Sustainable farming techniques (rotation)**

Many of the benefits of a stringent rotation program are not quantifiable in the short term and the benefits that are quantifiable are often disguised by other variables that can affect yield in any season. Growers however, are rotating to address the issues of disease and to allow for the re-levelling of fields.

If farmers are going to maintain a sustainable cotton production system, maintain high yields, and achieve high levels of profitability in the long term, the issue of rotation needs to be included in the equation.

Obviously the amount of water plays a huge role in rotation; however the idea is to aim for a 2:1 rotation in the long term.

The top performers are continually looking at varied crops for rotation. These decisions are being made for agronomic and financial reasons. Industry awareness is required to learn from these operators.

- **Water use efficiency**

The timing of when water is applied is critical in the production of high yielding crops.

As water becomes even more limited, the science behind the timing of watering and understanding each variety's reaction to the timing of water will become even more crucial. Growers are now paying closer attention to measuring water use efficiency.

- **Conservative levels of debt**

Many farmers are carrying large amounts of debt, with debt levels of 40% to 50% being common. By adopting sound, sustainable practices, the best farmers have been able to generate a significant cash surplus to repay borrowings. The best farmers are in an enviable position of being able to survive in tough times, and in some circumstances expand the scale of their operations.

It must be noted that debt can only be repaid out of a cash surplus after allowing for taxation, drawings and capital purchases, or from the sale of other assets. During the last 15 years there has been significant capital gain for the holders of water licences. This has allowed debt levels to increase whilst maintaining the debt to equity margin. We do not believe that capital gain can continue at the same rate and the future reduction in the debt to equity margin will need to be out of profits, not capital gain.

Our current low interest rate environment should encourage growers to look at protecting their borrowings through interest rate management. Financiers are offering many varied products that provide this protection.

Farmers are considered to be in a very solid financial position (category A) if their debt, net of equity in cotton pools and unsold crop, is less than 20% of assets at 30 June.

- **Efficient financial management**

Good farmers keep their financial affairs up to date and under control by utilising computerised office tools.

Annual budgets are prepared by the Top performers on a conservative basis with realistic yet challenging targets. Performance is then monitored monthly, comparing actual results with the previously prepared budget. With up-to-date management reports, Top performers are able to analyse performance and fine tune operations on a regular basis. They also keep their financiers well informed at all times.

- **Timing**

The best farms carry out all operations 'on time'. Fields are ready to plant as soon as the season permits, machinery is always ready to carry out the next task and team members always know what they have to do a week or a month ahead. Waterings are never late.

Being 'on time' is a result of good planning and good communication and leads to increased yields.

- **Planning and long term vision**

At the heart of every good operation is a person with vision; vision of where the business is going on a day-to-day basis, on an annual basis, and on a long-term basis (ten years plus). The best farmers always seem to have time on their hands because they have clearly defined goals. They have communicated those goals to their team members, and then take on the role of a coach who guides and encourages their team to carry out the day-to-day activities.

- **High yields**

High yields are the reward for getting all aspects of a farming operation right. No single farming technique, method of operation or management decision is going to have a significant impact. Top performers do all the little things thoroughly and on time and as a consequence 'reap the rewards'.

The best farmers consistently achieve yields in excess of 11 bales/ha year after year (assuming adequate water availability and no disasters such as hail or floods). Total farm averages of greater than 14 bales/ha have been achieved and are now a realistic goal, especially using the excellent cotton varieties that are continually being developed.

2.2 RETURN ON ASSETS

2.2.1 WHAT RETURN ON ASSETS AM I GETTING?

With costs continuing to rise, low cotton prices (for this season), cotton farm sales sluggish and a lot of discussion regarding where capital growth in the industry will come from, growers must continue to look at the return on assets of a cotton farm.

Although a long term view is essential, growers must continually look at alternative investments (allowing for risk) to assess what the return of a cotton farm really is.

As a general statement, the 10 year average figures should not be used when analysing the return on assets of the industry as a whole without making an allowance for the drought years where the figures on non-irrigated areas have not been included in the report and taking into account the fallow fields.

Trend lines indicate that the operating profit for the Top 20% and the Average Group are both increasing slightly, but this is strongly influenced by the 2011 year where there were both high yields and prices achieved.

How do I calculate my simple return on assets (ROA)?

The simple ROA is calculated by dividing your operating profit per hectare (before interest) by the value per hectare (which is calculated as the total value of your land, licences and machinery divided by the number of hectares grown during the year).

We have included a worksheet to calculate your individual ROA. The process is easy to follow and is outlined below:-

- From the farm operating profit/(loss) per ha spreadsheet find your yield and price per bale. Match these up to calculate your operating profit (before interest) based on costs of \$3,500/ha.
- Find the profit closest to your farm along the base of the return on assets based on various profits and land variations spreadsheets.
- Select a value per hectare (this is calculated as the total value of your land, licences and machinery divided by the number of hectares grown during the year), then:
 - a) You should add a value per hectare to allow for country not planted. If you plant 2/3 of your country, increase the value of your investment by 50%.
 - b) You also should add a value per hectare based on your machinery investment relating to the cotton operation e.g. \$1,500,000 machinery divided by 1,500 hectares increases your investment by \$1,000/ha).
- Match the two up and calculate your simple return on assets.

2.2.2 WHY MEASURE ROA?

In isolation ROA provides you with a measure to better assess alternative investments. One year's ROA result should not serve as the yardstick to base decisions such as entry or exit of the industry.

This ROA does not include any increase in the value of your assets. If in a year you achieve 7% ROA and the value of your assets increased by 5% then your total return is 12%.

Linked directly to this is the fact that you now have a higher asset value, and next year if you achieve the same profit, your ROA will be lower.

Use the calculator to predict what your future returns may be.

For example:

- Assume a profit of \$800/ha against today's valuation of \$10,000/ha – 8% return
- Now use the same profit against an increased market rate of \$15,000/ha – 5.3% return
- To achieve an 8% return against a \$15,000/ha valuation you need to reach a profit of \$1,200/ha.

The cotton yield remains the greatest variable when looking forward or doing current comparisons between growers. As discussed in this and prior reports, land productivity (yield) contributes to the majority of the difference between the Top 20% and the average. What difference does yield make on ROA?

For example:

- Five year average profit to 2015 (before interest) for the Average Group of \$1,430/ha against \$17,500/ha – 8.0% return
- Five year average profit to 2015 (before interest) for the Top 20% Group of \$2,510/ha against \$17,500/ha – 14.00% return

(Yield differential of 1.43 bales/ha).

ROA needs to be balanced against such factors as risk, sustainability and reinvestment. If a grower's main aim is to just increase the ROA, this may have a negative impact on sustainability, as they may not reinvest through redevelopment and take other sustainable actions.

There is a direct link between ROA and yield. The industry continues to strive for increased yield with the challenge of balancing long term sustainability.

RETURN ON ASSETS CALCULATOR 2015

FARM OPERATING PROFIT/(LOSS) PER HECTARE BASED ON ALTERNATIVE YIELDS AND PRICES – BEFORE INTEREST

650	1,213	1,375	1,538	1,700	1,863	2,025	2,188	2,350	2,513	2,675	2,838	3,000	3,163	3,325	3,488	3,650	3,813	3,975	4,138	4,300	4,463	4,625
640	1,140	1,300	1,460	1,620	1,780	1,940	2,100	2,260	2,420	2,580	2,740	2,900	3,060	3,220	3,380	3,540	3,700	3,860	4,020	4,180	4,340	4,500
630	1,068	1,225	1,383	1,540	1,698	1,855	2,013	2,170	2,328	2,485	2,643	2,800	2,958	3,115	3,273	3,430	3,588	3,745	3,903	4,060	4,218	4,375
620	995	1,150	1,305	1,460	1,615	1,770	1,925	2,080	2,235	2,390	2,545	2,700	2,855	3,010	3,165	3,320	3,475	3,630	3,785	3,940	4,095	4,250
610	923	1,075	1,228	1,380	1,533	1,685	1,838	1,990	2,143	2,295	2,448	2,600	2,753	2,905	3,058	3,210	3,363	3,515	3,668	3,820	3,973	4,125
600	850	1,000	1,150	1,300	1,450	1,600	1,750	1,900	2,050	2,200	2,350	2,500	2,650	2,800	2,950	3,100	3,250	3,400	3,550	3,700	3,850	4,000
590	778	925	1,073	1,220	1,368	1,515	1,663	1,810	1,958	2,105	2,253	2,400	2,548	2,695	2,843	2,990	3,138	3,285	3,433	3,580	3,728	3,875
580	705	850	995	1,140	1,285	1,430	1,575	1,720	1,865	2,010	2,155	2,300	2,445	2,590	2,735	2,880	3,025	3,170	3,315	3,460	3,605	3,750
570	633	775	918	1,060	1,203	1,345	1,488	1,630	1,773	1,915	2,058	2,200	2,343	2,485	2,628	2,770	2,913	3,055	3,198	3,340	3,483	3,625
560	560	700	840	980	1,120	1,260	1,400	1,540	1,680	1,820	1,960	2,100	2,240	2,380	2,520	2,660	2,800	2,940	3,080	3,220	3,360	3,500
550	488	625	763	900	1,038	1,175	1,313	1,450	1,588	1,725	1,863	2,000	2,138	2,275	2,413	2,550	2,688	2,825	2,963	3,100	3,238	3,375
540	415	550	685	820	955	1,090	1,225	1,360	1,495	1,630	1,765	1,900	2,035	2,170	2,305	2,440	2,575	2,710	2,845	2,980	3,115	3,250
530	343	475	608	740	873	1,005	1,138	1,270	1,403	1,535	1,668	1,800	1,933	2,065	2,198	2,330	2,463	2,595	2,728	2,860	2,993	3,125
520	270	400	530	660	790	920	1,050	1,180	1,310	1,440	1,570	1,700	1,830	1,960	2,090	2,220	2,350	2,480	2,610	2,740	2,870	3,000
510	198	325	453	580	708	835	963	1,090	1,218	1,345	1,473	1,600	1,728	1,855	1,983	2,110	2,238	2,365	2,493	2,620	2,748	2,875
500	125	250	375	500	625	750	875	1,000	1,125	1,250	1,375	1,500	1,625	1,750	1,875	2,000	2,125	2,250	2,375	2,500	2,625	2,750
490	53	175	298	420	543	665	788	910	1,033	1,155	1,278	1,400	1,523	1,645	1,768	1,890	2,013	2,135	2,258	2,380	2,503	2,625
480	-20	100	220	340	460	580	700	820	940	1,060	1,180	1,300	1,420	1,540	1,660	1,780	1,900	2,020	2,140	2,260	2,380	2,500
470	-93	25	143	260	378	495	613	730	848	965	1,083	1,200	1,318	1,435	1,553	1,670	1,788	1,905	2,023	2,140	2,258	2,375
460	-165	-50	65	180	295	410	525	640	755	870	985	1,100	1,215	1,330	1,445	1,560	1,675	1,790	1,905	2,020	2,135	2,250
450	-238	-125	-13	100	213	325	438	550	663	775	888	1,000	1,113	1,225	1,338	1,450	1,563	1,675	1,788	1,900	2,013	2,125
440	-310	-200	-90	20	130	240	350	460	570	680	790	900	1,010	1,120	1,230	1,340	1,450	1,560	1,670	1,780	1,890	2,000
430	-383	-275	-168	-60	48	155	263	370	478	585	693	800	908	1,015	1,123	1,230	1,338	1,445	1,553	1,660	1,768	1,875
	7.25	7.50	7.75	8.00	8.25	8.50	8.75	9.00	9.25	9.50	9.75	10.00	10.25	10.50	10.75	11.00	11.25	11.50	11.75	12.00	12.25	12.50

\$ / BALE

AVERAGE YIELD PER HECTARE

(COST PER HA USED : \$3,500)

Steps

1. Pick your price per bale and yield/ha.
2. Match them up and get your profit per hectare based on growing costs of \$3,500.
3. Find your closest profit range on the bottom of the next graph.

RETURN ON ASSETS CALCULATOR 2015

RETURN ON ASSETS BASED ON VARIOUS PROFITS AND LAND VALUATIONS

	100	300	500	600	700	800	900	1,000	1,100	1,200	1,300	1,400	1,500	1,700	1,900	2,000	2,200	2,400	2,600	2,800	3,000	3,200
\$55,000	0.3%	0.9%	1.4%	1.7%	2.0%	2.3%	2.6%	2.9%	3.1%	3.4%	3.7%	4.0%	4.3%	4.9%	5.4%	5.7%	6.3%	6.9%	7.4%	8.0%	8.6%	9.1%
\$54,000	0.3%	0.9%	1.5%	1.8%	2.1%	2.4%	2.6%	2.9%	3.2%	3.5%	3.8%	4.1%	4.4%	5.0%	5.6%	5.9%	6.5%	7.1%	7.6%	8.2%	8.8%	9.4%
\$53,000	0.3%	0.9%	1.5%	1.8%	2.1%	2.4%	2.7%	3.0%	3.3%	3.6%	3.9%	4.2%	4.5%	5.2%	5.8%	6.1%	6.7%	7.3%	7.9%	8.5%	9.1%	9.7%
\$52,000	0.3%	0.9%	1.6%	1.9%	2.2%	2.5%	2.8%	3.1%	3.4%	3.8%	4.1%	4.4%	4.7%	5.3%	5.9%	6.3%	6.9%	7.5%	8.1%	8.8%	9.4%	10.0%
\$51,000	0.3%	1.0%	1.6%	1.9%	2.3%	2.6%	2.9%	3.2%	3.5%	3.9%	4.2%	4.5%	4.8%	5.5%	6.1%	6.5%	7.1%	7.7%	8.4%	9.0%	9.7%	10.3%
\$50,000	0.3%	1.0%	1.7%	2.0%	2.3%	2.7%	3.0%	3.3%	3.7%	4.0%	4.3%	4.7%	5.0%	5.7%	6.3%	6.7%	7.3%	8.0%	8.7%	9.3%	10.0%	10.7%
\$49,000	0.3%	1.0%	1.7%	2.1%	2.4%	2.8%	3.1%	3.4%	3.8%	4.1%	4.5%	4.8%	5.2%	5.9%	6.6%	6.9%	7.6%	8.3%	9.0%	9.7%	10.3%	11.0%
\$48,000	0.4%	1.1%	1.8%	2.1%	2.5%	2.9%	3.2%	3.6%	3.9%	4.3%	4.6%	5.0%	5.4%	6.1%	6.8%	7.1%	7.9%	8.6%	9.3%	10.0%	10.7%	11.4%
\$47,000	0.4%	1.1%	1.9%	2.2%	2.6%	3.0%	3.3%	3.7%	4.1%	4.4%	4.8%	5.2%	5.6%	6.3%	7.0%	7.4%	8.1%	8.9%	9.6%	10.4%	11.1%	11.9%
\$46,000	0.4%	1.2%	1.9%	2.3%	2.7%	3.1%	3.5%	3.8%	4.2%	4.6%	5.0%	5.4%	5.8%	6.5%	7.3%	7.7%	8.5%	9.2%	10.0%	10.8%	11.5%	12.3%
\$45,000	0.4%	1.2%	2.0%	2.4%	2.8%	3.2%	3.6%	4.0%	4.4%	4.8%	5.2%	5.6%	6.0%	6.8%	7.6%	8.0%	8.8%	9.6%	10.4%	11.2%	12.0%	12.8%
\$44,000	0.4%	1.3%	2.1%	2.5%	2.9%	3.3%	3.8%	4.2%	4.6%	5.0%	5.4%	5.8%	6.3%	7.1%	7.9%	8.3%	9.2%	10.0%	10.8%	11.7%	12.5%	13.3%
\$43,000	0.4%	1.3%	2.2%	2.6%	3.0%	3.5%	3.9%	4.3%	4.8%	5.2%	5.7%	6.1%	6.5%	7.4%	8.3%	8.7%	9.6%	10.4%	11.3%	12.2%	13.0%	13.9%
\$42,000	0.5%	1.4%	2.3%	2.7%	3.2%	3.6%	4.1%	4.5%	5.0%	5.5%	5.9%	6.4%	6.8%	7.7%	8.6%	9.1%	10.0%	10.9%	11.8%	12.7%	13.6%	14.5%
\$41,000	0.5%	1.4%	2.4%	2.9%	3.3%	3.8%	4.3%	4.8%	5.2%	5.7%	6.2%	6.7%	7.1%	8.1%	9.0%	9.5%	10.5%	11.4%	12.4%	13.3%	14.3%	15.2%
\$40,000	0.5%	1.5%	2.5%	3.0%	3.5%	4.0%	4.5%	5.0%	5.5%	6.0%	6.5%	7.0%	7.5%	8.5%	9.5%	10.0%	11.0%	12.0%	13.0%	14.0%	15.0%	16.0%
\$39,000	0.5%	1.6%	2.6%	3.2%	3.7%	4.2%	4.7%	5.3%	5.8%	6.3%	6.8%	7.4%	7.9%	8.9%	10.0%	10.5%	11.6%	12.6%	13.7%	14.7%	15.8%	16.8%
\$38,000	0.6%	1.7%	2.8%	3.3%	3.9%	4.4%	5.0%	5.6%	6.1%	6.7%	7.2%	7.8%	8.3%	9.4%	10.6%	11.1%	12.2%	13.3%	14.4%	15.6%	16.7%	17.8%
\$37,000	0.6%	1.8%	2.9%	3.5%	4.1%	4.7%	5.3%	5.9%	6.5%	7.1%	7.6%	8.2%	8.8%	10.0%	11.2%	11.8%	12.9%	14.1%	15.3%	16.5%	17.6%	18.8%
\$36,000	0.6%	1.9%	3.1%	3.8%	4.4%	5.0%	5.6%	6.3%	6.9%	7.5%	8.1%	8.8%	9.4%	10.6%	11.9%	12.5%	13.8%	15.0%	16.3%	17.5%	18.8%	20.0%
\$35,000	0.7%	2.0%	3.3%	4.0%	4.7%	5.3%	6.0%	6.7%	7.3%	8.0%	8.7%	9.3%	10.0%	11.3%	12.7%	13.3%	14.7%	16.0%	17.3%	18.7%	20.0%	21.3%

PROFIT PER HECTARE FROM PREVIOUS WORKSHEET

VALUE /HA

Steps

1. Select a value of your land, licences and machinery that are applicable to the cotton operation.
2. Divide the value in 1. by the number of hectares grown in the year.
3. Use your closest profit and the value per hectare to work out the return on your investment.

2.3 CONCLUSION

The 2015 was very favourable in terms of weather.

Yields per hectare increased markedly from previous year and were well above the five year averages.

Average farm yields of 14.5 bales with costs of up to \$3,500 per hectare are now an achievable goal.

Net profit per hectare was the best on record for this analysis.

In the 2012 report, we predicted that that 2013 and 2014 would be tough financially for the industry. This prediction played out, with poor per hectare returns on areas grown and many operators having overall farm losses. While favourable conditions in 2015 returned a bumper profit on the hectares that were able to be grown, in many circumstances this still resulted in an overall farm loss.

In coming years it will be interesting to see the numbers play out between the perceived reliability of water in the Southern Valleys and the more established areas. Although it is a difficult concept to analyse, we believe there is a real value difference between more reliable yearly profits and a less reliable figure, even where the average is the same.

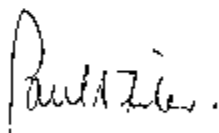
While water licenses continue to either increase or hold their value, the value of irrigation land in the more established valleys continues to lag behind increases in dryland farming country. This reinforces the fact that farmers are in two businesses – the business of growing crops and the business of owning land, improvements and water. With investment and leasing options associated with land and water becoming more common-place, perhaps growers should be reviewing the two separate activities of farming and real estate ownership separately. In short, you do not need to own land or water to be an irrigator. It is critical that the land and water assets are viewed and analysed separately. For example, the value of irrigation land should be reviewed with respect to the value of dryland farming country plus irrigation improvements while each type of water (general security, supplementary and overland flow) should be analysed instead of water as a whole.

The agricultural sector in general and the cotton industry in particular are known for their early adoption of technology. In the hunt for yield, the question will increasingly be who owns the technology that will facilitate this yield increase and how much will it cost to access.

It is critical that farmers understand what it takes to maximise profit and to be in the Top 20% Group. When they understand this, practically implementing change in a formal way is critical.

The 2015 Australian Cotton Comparative Analysis maintains our goal to measure and analyse the components that provide farmers with a stronger financial bottom line.

The cotton industry continues to reinvest in BMP, sustainability programs and in the communities in which it operates.



Paul Fisher
Director | Boyce Chartered Accountants
Moree NSW
pfisher@boyceca.com

3

Comparative Statistics



3.1 PARTICIPANTS

3.1.1 COMPARISON OF AVERAGE INCOME AND EXPENSE ITEMS FOR THE 2015 YEAR FOR LANDHOLDING FARMERS (PER HECTARE BASIS)

	YOUR FARM (TOTAL)	YOUR FARM	ALL FARMES	TOP 20%	BOTTOM 20%	LOW COST	GROWERS (> 2,000 HA)
INCOME							
Cotton proceeds - Lint			6,133	7,071	4,988	5,699	6,187
Cotton proceeds - Seed			1,180	1,467	784	1,156	1,138
Ginning			(744)	(789)	(606)	(710)	(725)
Levies			(54)	(54)	(41)	(56)	(53)
Cotton proceeds - Hail claims			10	0	50	7	4
			6,525	7,695	5,175	6,096	6,551
EXPENSES							
Cartage			106	74	84	109	114
Chemical application			146	148	125	140	164
Chemicals - Defoliants			61	58	55	58	66
Chemicals - Herbicides			116	140	118	101	114
Chemicals - Insecticides			112	174	80	109	116
Chemicals - Others			6	10	4	5	5
Chipping			1	1	0	1	1
Consultants			45	70	47	16	44
Contract picking			151	144	205	169	205
Contract farming and ripping			102	152	291	33	144
Cotton picking wrap and sundries			104	98	67	90	108
Depreciation			354	411	586	269	291
Electricity			104	31	140	37	77
Fertiliser			478	485	495	444	461
Fuel and oil			377	349	613	284	361
Hire of plant			39	1	27	21	48
Insurance			116	159	77	87	109
Licence fee - Bollgard			270	192	257	277	260
Licence fee - Roundup ready			69	63	70	66	70
Motor vehicle expenses			23	14	26	18	15
R & M - Farming plant			159	146	123	84	96
R & M - Pumps and earthworks			217	334	302	124	177
Seed			140	154	123	133	138
Water charges			343	184	512	303	324
Wages - Employees			514	338	679	525	472
Wages - Proprietors			25	12	41	8	0
Administration			93	33	201	55	63
Other farm overheads			92	87	93	77	77
			4,363	4,062	5,441	3,643	4,120
OPERATING PROFIT/(LOSS)			2,162	3,633	(266)	2,453	2,431
ADD:							
Wages - Proprietors			25	12	41	8	0
FARM OPERATING PROFIT/(LOSS)			2,187	3,645	(225)	2,461	2,431

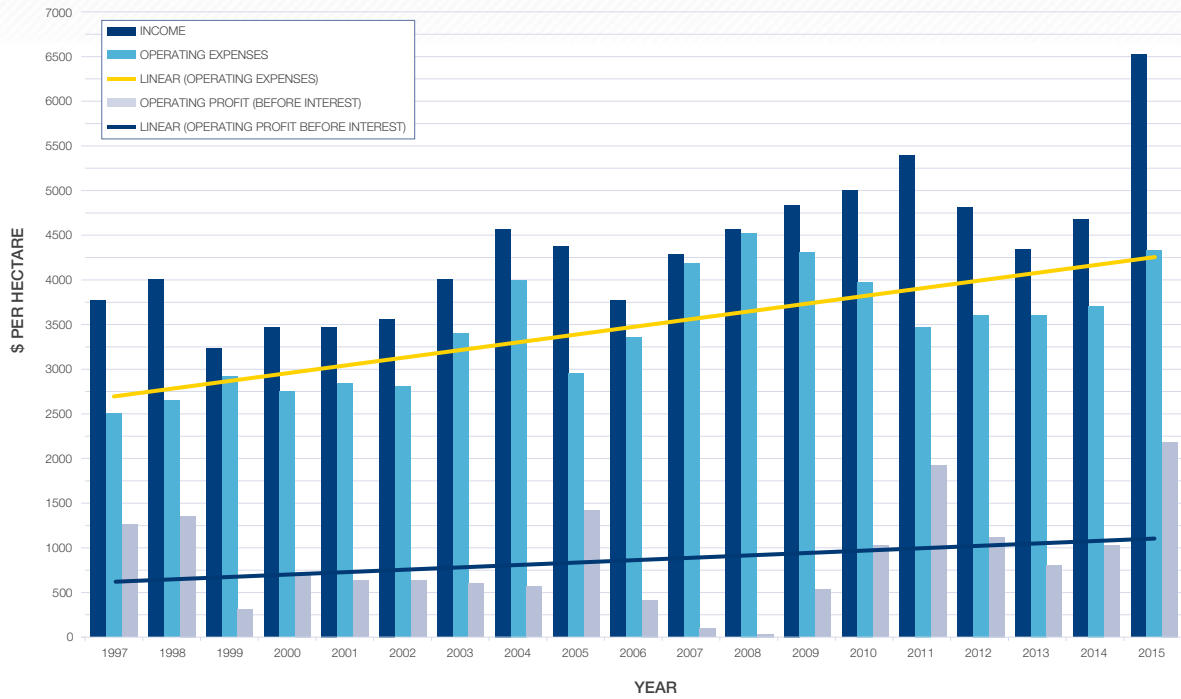
3.1.1 COMPARISON OF AVERAGE INCOME AND EXPENSE ITEMS FOR THE 2015 YEAR FOR LANDHOLDING FARMERS (continued)

	YOUR FARM (TOTAL)	YOUR FARM	ALL FARMS	TOP 20%	BOTTOM 20%	LOW COST	LARGE GROWERS (>2,000 HA)
DEDUCT:							
Interest and bank charges			288	257	217	194	55
Interest - Crop terms			0	0	0	0	0
			288	257	217	194	55
FARM NET PROFIT/(LOSS)			\$1,899	\$3,388	(\$442)	\$2,267	\$2,376
CROP RESULTS							
Hectares of cotton grown			926.11	997.79	678.83	1,242.29	2,677.24
Total yield			11,660.33	14,283.13	6,889.59	14,707.30	33,723.65
Yield per hectare			12.59	14.31	10.15	11.84	12.60
Value per bale			\$517.48	\$537.62	\$505.04	\$514.36	\$519.73
Cost of production per bale			\$346.53	\$283.59	\$536.05	\$307.83	\$327.12
Operating profit/(loss) per bale			\$171.72	\$254.03	(\$26.09)	\$207.08	\$192.89
Number of bales per hectare required to cover operating expenses			8.43	7.55	10.77	7.09	7.93
Number of bales per hectare required to cover total expenses			8.99	8.03	11.20	7.46	8.03
LABOUR							
Number of Hectares per permanent person (excluding proprietors)			224.22	332.60	214.37	161.94	349.21
AVAILABLE TRACTOR HORSE POWER							
Tractor horse power per 500 hectares			398.99	469.70	557.33	432.90	217.57
AVAILABLE PICKING CAPACITY							
Picker heads per 500 hectares			4.21	3.67	2.70	2.76	2.43
ROTATION							
Percentage of the current years' crop being grown on fallow fields or new fields (developed within the last three years)			45.38%	77.77%	6.87%	52.80%	52.59%
WATER USAGE							
Megalitres per hectare			6.73	6.38	2.97	8.22	4.76
Megalitres per bale			0.53	0.45	0.29	0.69	0.38

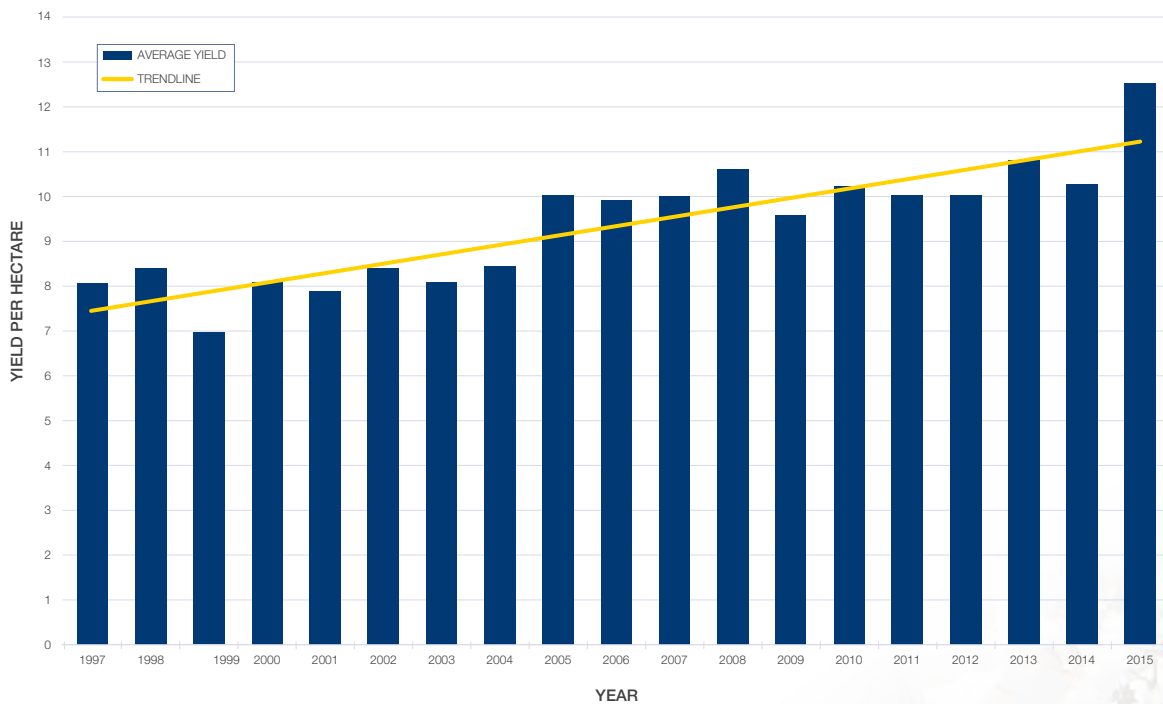
3.2 AVERAGE

3.2.1 GRAPHS

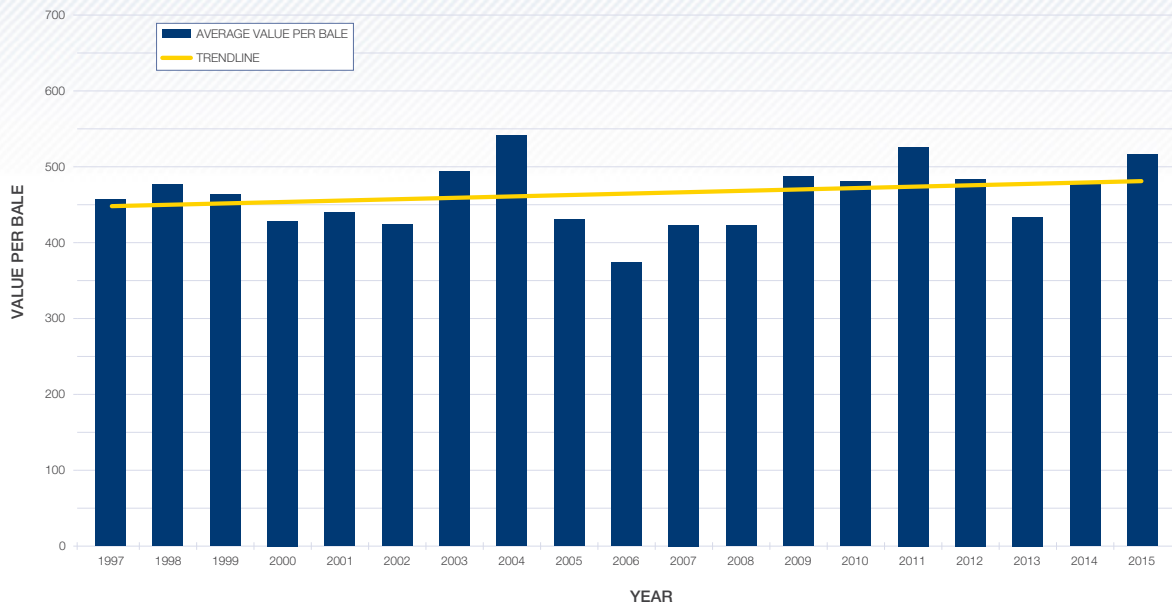
3.2.1.1 COMPARISON OF AVERAGE INCOME AND EXPENSE ITEMS FOR LANDHOLDERS



3.2.1.2 YIELD AND TRENDLINE FOR THE AVERAGE LANDHOLDERS



3.2.1.3 VALUE PER BALE AND TRENDLINE FOR THE AVERAGE LANDHOLDERS



3.2.2 COMPARISON OF AVERAGE INCOME AND EXPENSE ITEMS FOR THE PAST 10 YEARS FOR LANDHOLDING FARMERS (PER HA)

2006	2007	2008	2009	2010	2011	2012	2013	2014		2015
INCOME										
3,788	3,963	4,027	4,265	4,758	5,256	4,866	4,712	4,709	Cotton proceeds - Lint	6,133
436	859	1,016	935	742	546	400	524	805	Cotton proceeds - Seed	1,180
(479)	(551)	(521)	(495)	(542)	(484)	(512)	(630)	(621)	Ginning	(744)
(33)	(38)	(33)	(37)	(35)	(33)	(31)	(36)	(46)	Levies	(54)
55	49	73	169	79	106	70	17	57	Cotton proceeds - Hail claims	10
3,767	4,282	4,562	4,837	5,002	5,391	4,793	4,587	4,904		6,525
EXPENSES										
105	128	101	100	112	136	117	132	86	Cartage	106
158	115	110	87	136	138	131	106	151	Chemical application	146
57	54	71	79	63	55	53	42	49	Chemicals - Defoliants	61
109	159	183	174	108	108	85	84	115	Chemicals - Herbicides	116
292	132	116	144	151	142	84	35	81	Chemicals - Insecticides	112
3	3	4	48	38	11	7	5	4	Chemicals - Others	6
66	91	39	24	15	2	3	3	2	Chipping	1
59	75	63	76	72	64	57	52	43	Consultants	45
180	257	250	255	261	282	241	176	182	Contract picking	151
89	77	85	42	24	122	164	215	100	Contract farming and ripping	102
11	10	6	14	9	55	84	78	75	Cotton picking wrap and sundries	104
199	338	508	372	426	164	178	227	249	Depreciation	354
21	40	46	59	79	76	29	45	50	Electricity	104
356	312	394	428	399	387	517	546	533	Fertiliser	478
323	418	429	327	305	258	271	403	380	Fuel and oil	377
3	9	12	2	7	22	43	32	52	Hire of plant	39
144	227	216	217	179	161	123	110	104	Insurance	116
150	173	232	218	252	286	292	310	305	Licence fee - Bollgard	270
25	26	50	50	62	60	56	39	69	Licence fee - Roundup ready	69
22	30	31	34	35	21	19	19	19	Motor vehicle expenses	23
135	133	139	137	154	121	109	123	113	R & M - Farming plant	159
101	128	133	116	183	61	84	130	159	R & M - Pumps and earthworks	217
77	112	98	105	126	115	146	107	79	Seed	140
188	399	439	486	189	134	141	160	306	Water charges	343
327	473	445	391	384	357	344	380	391	Wages - Employees	514
38	96	105	106	69	20	21	31	17	Wages - Proprietors	25
41	68	58	58	35	49	47	52	56	Administration	93
73	103	162	154	103	65	155	166	148	Other farm overheads	92
3,352	4,186	4,525	4,303	3,976	3,472	3,601	3,808	3,918		4,363
415	96	37	534	1,026	1,919	1,192	779	986	OPERATING PROFIT/(LOSS)	2,162
38	96	105	106	69	20	21	31	17	Wages - Proprietors	25
453	192	142	640	1,095	1,939	1,213	810	1,003	FARM OPERATING PROFIT/(LOSS)	2,187

3.2.2 COMPARISON OF AVERAGE INCOME AND EXPENSE ITEMS FOR THE PAST 10 YEARS FOR LANDHOLDING FARMERS (PER HA) (continued)

2006	2007	2008	2009	2010	2011	2012	2013	2014		2015
DEDUCT:										
544	1,168	1,704	1,137	1,009	380	409	389	292	Interest and bank charges	288
4	0	0	0	0	0	0	11	0	Interest - Crop terms	0
548	1,168	1,704	1,137	1,009	380	409	400	292		288
(\$95)	(\$976)	(\$1,562)	(\$497)	\$86	\$1,559	\$804	\$410	\$711	FARM NET PROFIT/(LOSS)	\$1,899
CROP RESULTS										
936.02	531.13	449.09	486.65	621.17	1,426.48	1,675.67	1,517.64	1,593.12	Hectares of cotton grown	926.11
9,285.42	5,311.07	4,769.71	4,660.90	6,363.40	14,325.75	16,272.11	16,223.03	16,320.98	Total yield (bales)	11,660.33
9.92	10.00	10.62	9.58	10.24	10.04	9.71	10.69	10.24	Yield per hectare (bales)	12.59
\$374.23	\$423.35	\$422.66	\$487.41	\$480.56	\$526.23	\$486.42	\$427.44	\$473.05	Value per bale	\$517.48
\$337.82	\$418.66	\$425.99	\$449.40	\$388.37	\$345.82	\$370.77	\$356.27	\$382.31	Cost of production per bale	\$346.53
\$41.94	\$9.61	\$3.50	\$55.70	\$99.94	\$190.92	\$122.89	\$72.75	\$96.31	Operating profit per bale	\$171.72
8.95	9.89	10.70	8.83	8.28	6.60	7.40	8.91	8.28	Number of bales per hectare required to cover operating expenses	8.43
10.42	12.65	14.74	11.16	10.38	7.32	8.24	9.85	8.90	Number of bales per hectare required to cover total expenses	8.99
LABOUR										
185.44	139.77	107.24	171.76	167.24	184.91	322.79	221.25	226.43	Number of hectares per permanent person (excluding proprietors)	224.22
AVAILABLE TRACTOR HORSE POWER										
409.98	446.78	453.75	566.80	632.44	313.55	219.08	370.72	314.73	Tractor horse power per 500 hectares	398.99
AVAILABLE PICKING CAPACITY										
2.44	2.26	1.67	2.05	1.84	2.38	1.05	1.28	2.33	Picker heads per 500 hectares	4.21
ROTATION										
69.44%	49.67%	48.99%	51.68%	33.69%	69.98%	35.46%	35.71%	59.89%	Percentage of the current years' crop being grown on fallow fields or new fields (developed within the last three years)	45.38%
WATER USAGE										
9.62	9.00	9.00	9.00	9.00	8.78	8.80	9.39	9.87	Megalitres per hectare	6.73
0.97	0.90	0.85	0.94	0.88	0.87	0.91	0.88	0.96	Megalitres per bale	0.53
1,533	1,742	1,829	1,989	1,667	1,608	1,680	1,619	1,736	Direct costs	1,851
1,819	2,444	2,696	2,314	2,309	1,864	1,921	2,189	2,182	Other costs	2,512
3,352	4,186	4,525	4,303	3,976	3,472	3,601	3,808	3,918		4,363
442	305	348	362	403	428	376	345	386	Insecticide and Licence Fee Bollgard	382
600	420	458	449	539	566	507	451	537	Insecticide and Licence Fee Bollgard and application	528
344	458	457	386	384	334	300	448	430	Energy costs	481

3.2.3 COMPARISON OF AVERAGE RESULTS BETWEEN THE 2015 AND 2014 YEAR (PER HA)

	ALL FARMS 2015	ALL FARMS 2014	DIFFERENCE
INCOME			
Cotton proceeds - Lint	6,133	4,709	1,424
Cotton proceeds - Seed	1,180	805	375
Ginning	(744)	(621)	(123)
Levies	(54)	(46)	(8)
Cotton proceeds - Hail claims	10	57	(47)
	6,525	4,904	1,621
EXPENSES			
Cartage	106	86	(20)
Chemical application	146	151	5
Chemicals - Defoliants	61	49	(12)
Chemicals - Herbicides	116	115	(1)
Chemicals - Insecticides	112	81	(31)
Chemicals - Others	6	4	(2)
Chipping	1	2	1
Consultants	45	43	(2)
Contract picking	151	182	31
Contract farming and ripping	102	100	(2)
Cotton picking wrap and sundries	104	75	(29)
Depreciation	354	249	(105)
Electricity	104	50	(54)
Fertiliser	478	533	55
Fuel and oil	377	380	3
Hire of plant	39	52	13
Insurance	116	104	(12)
Licence fee - Bollgard	270	305	35
Licence fee - Roundup Ready	69	69	0
Motor vehicle expenses	23	19	(4)
R & M - Farming plant	159	113	(46)
R & M - Pumps and earthworks	217	159	(58)
Seed	140	79	(61)
Water charges and purchases	343	306	(37)
Wages - Employees	514	391	(123)
Wages - Proprietors	25	17	(8)
Administration	93	56	(37)
Other farm overheads	92	148	56
	4,363	3,918	(445)
OPERATING PROFIT/(LOSS)	2,162	986	1,176
ADD:			
Wages - Proprietors	25	17	(8)
FARM OPERATING PROFIT/(LOSS)	2,187	1,003	(1,184)

3.2.3 COMPARISON OF AVERAGE RESULTS BETWEEN THE 2015 AND 2014 YEAR (PER HA)

(continued)

	ALL FARMS 2015	ALL FARMS 2014	DIFFERENCE
DEDUCT:			
Interest and bank charges	288	292	4
Interest - Crop terms	0	0	0
	288	292	4
FARM NET PROFIT/(LOSS)	\$1,899	\$711	\$1,188
CROP RESULTS			
Hectares of cotton grown	926.11	1,593.12	(667.01)
Total yield (bales)	11,660.33	16,320.98	(4,660.65)
Yield per hectare (bales)	12.59	10.24	2.35
Value per bale	\$517.48	473.05	\$44.43
Cost of production per bale	\$346.53	382.31	\$35.78
Operating profit per bale	\$171.72	96.31	\$75.41
Number of bales per hectare required to cover operating expenses	8.43	8.28	(0.15)
Number of bales per hectare required to cover total expenses	8.99	8.90	(0.09)
LABOUR			
Number of hectares per permanent person (excluding proprietors)	224.22	226.43	(2.21)
AVAILABLE TRACTOR HORSE POWER			
Tractor horse power per 500 hectares	398.99	314.73	(84.26)
AVAILABLE PICKING CAPACITY			
Picker heads per 500 hectares	4.21	2.33	(1.88)
ROTATION			
Percentage of the current years' crop being grown on fallow fields or new fields (developed within the last three years)	45.38%	59.89%	(14.51%)
WATER USAGE			
Megalitres per hectare	6.73	9.87	3.14
Megalitres per bale	0.53	0.96	0.43

3.2.4 COMPARISON OF AVERAGE OF THE DIFFERENT VALLEY'S INCOME AND EXPENSE ITEMS FOR THE 2015 YEAR FOR LANDHOLDING FARMERS (PER HA)

	ALL VALLEYS AVE FIGURES	GWYDIR AVE FIGURES	McINTYRE/ BARWON AVE FIGURES	MACQUARIE AVE FIGURES	NAMOI AVE FIGURES	SOUTHERN VALLEYS AVE FIGURES
INCOME						
Cotton proceeds - Lint	6,133	6,687	5,740	6,507	5,290	5,934
Cotton proceeds - Seed	1,180	1,383	1,084	1,199	1,225	999
Ginning	(744)	(760)	(711)	(782)	(799)	(762)
Levies	(54)	(53)	(49)	(56)	(52)	(49)
Cotton proceeds - Hail claims	10	6	0	0	95	0
	6,525	7,263	6,064	6,868	5,759	6,122
EXPENSES						
Cartage	106	61	51	174	52	119
Chemical application	146	161	77	123	135	162
Chemicals - Defoliant	61	62	47	58	52	70
Chemicals - Herbicides	116	144	115	124	164	98
Chemicals - Insecticides	112	167	81	59	100	79
Chemicals - Other	6	5	3	2	2	11
Chipping	1	2	0	0	0	0
Consultants	45	53	50	87	24	51
Contract picking	151	57	174	97	42	230
Contract farming and ripping	102	87	18	34	19	197
Cotton picking wrap and sundries	104	112	81	124	111	102
Depreciation	354	463	248	427	858	196
Electricity	104	75	25	57	297	162
Fertiliser	478	530	366	604	608	460
Fuel and oil	377	368	344	375	532	409
Hire of plant	39	34	10	13	37	83
Insurance	116	159	81	123	84	82
Licence fee - Bollgard	270	235	284	304	306	283
Licence fee - Roundup ready	69	67	55	70	70	70
Motor vehicle expenses	23	15	41	33	48	21
R & M - Farming plant	159	164	226	175	193	131
R & M - Pumps and earthworks	217	276	268	491	475	83
Seed	140	138	137	120	155	135
Water charges and purchases	343	286	174	822	337	352
Wages - Employees	514	448	522	471	998	403
Wages - Proprietors	25	16	81	203	19	4
Administration	93	51	241	107	183	119
Other farm overheads	92	69	122	167	132	89
	4,363	4,305	3,922	5,444	6,033	4,201
OPERATING PROFIT/(LOSS)	2,162	2,958	2,142	1,424	(274)	1,921
ADD:						
Wages - Proprietors	25	16	81	203	8	4
FARM OPERATING PROFIT/(LOSS)	2,187	2,974	2,223	1,627	(266)	1,925

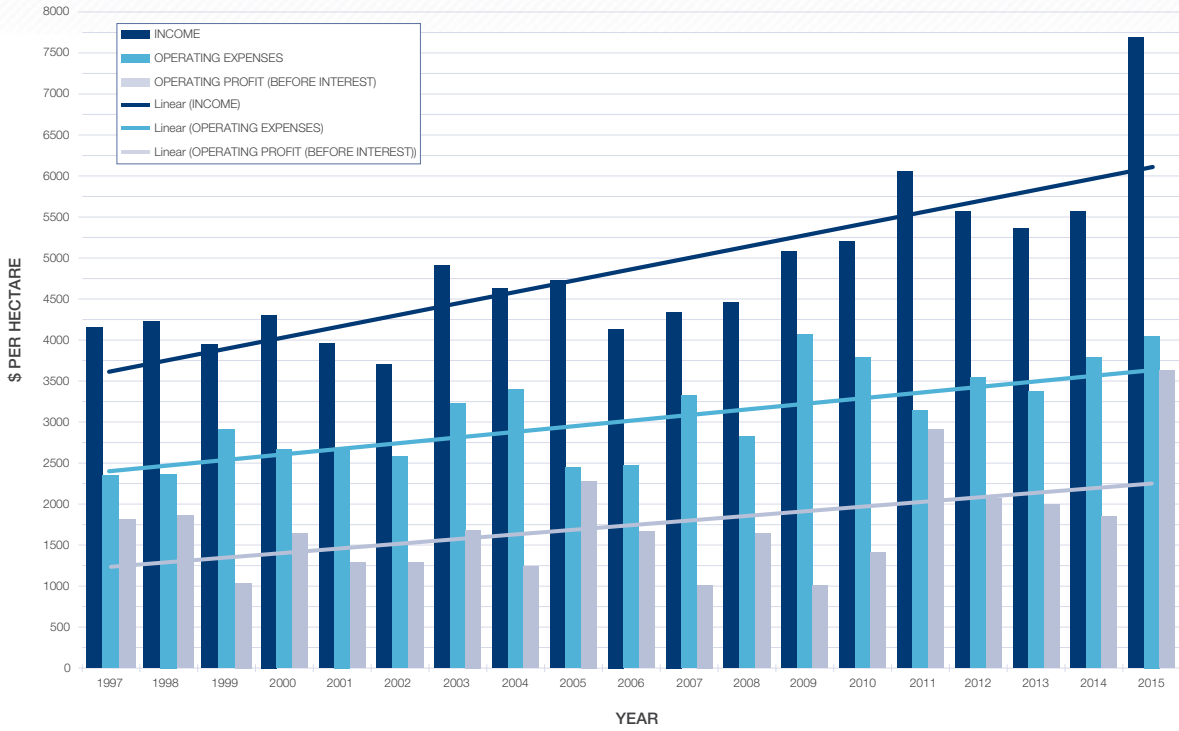
3.2.4 COMPARISON OF AVERAGE OF THE DIFFERENT VALLEY'S INCOME AND EXPENSE ITEMS FOR THE 2015 YEAR FOR LANDHOLDING FARMERS (PER HA) (continued)

	ALL VALLEYS AVE FIGURES	GWYDIR AVE FIGURES	McINTYRE/ BARWON AVE FIGURES	MACQUARIE AVE FIGURES	NAMOI AVE FIGURES	SOUTHERN VALLEYS AVE FIGURES
DEDUCT:						
Interest and bank charges	288	492	735	38	62	67
Interest - Crop terms	0	0	0	0	0	0
	288	492	735	38	62	67
FARM NET PROFIT/(LOSS)	\$1,899	\$2,482	\$1,488	\$1,589	(\$328)	\$1,858
CROP RESULTS						
Hectares of cotton grown	926	1,382	491	291	538	1,789
Total yield	11,660	18,647	5,874	3,769	5,984	21,960
Yield per hectare	13	13	12	13	11	12
Value per bale	517	538	507	530	518	500
Cost of production per bale	347	319	328	420	542	342
Operating profit/(loss) per bale	172	219	179	110	(25)	157
Number of bales per hectare required to cover operating expenses	8	8	8	10	12	8
Number of bales per hectare required to cover total expenses	9	9	9	10	12	9
LABOUR						
Number of Hectares per permanent person (excluding proprietors)	224	210	123	#DIV/0!	59	#DIV/0!
AVAILABLE TRACTOR HORSE POWER						
Tractor horse power per 500 hectares	399	371	709	254	1,638	0
AVAILABLE PICKING CAPACITY						
Picker heads per 500 hectares	4	2	5	0	9	0
ROTATION						
Percentage of the current years' crop being grown on fallow fields or new fields (developed within the last three years)	0	1	1	0	0	0
WATER USAGE						
Megalitres per hectare	7	7	17	1	22	0
Megalitres per bale	1	0	1	0	2	0

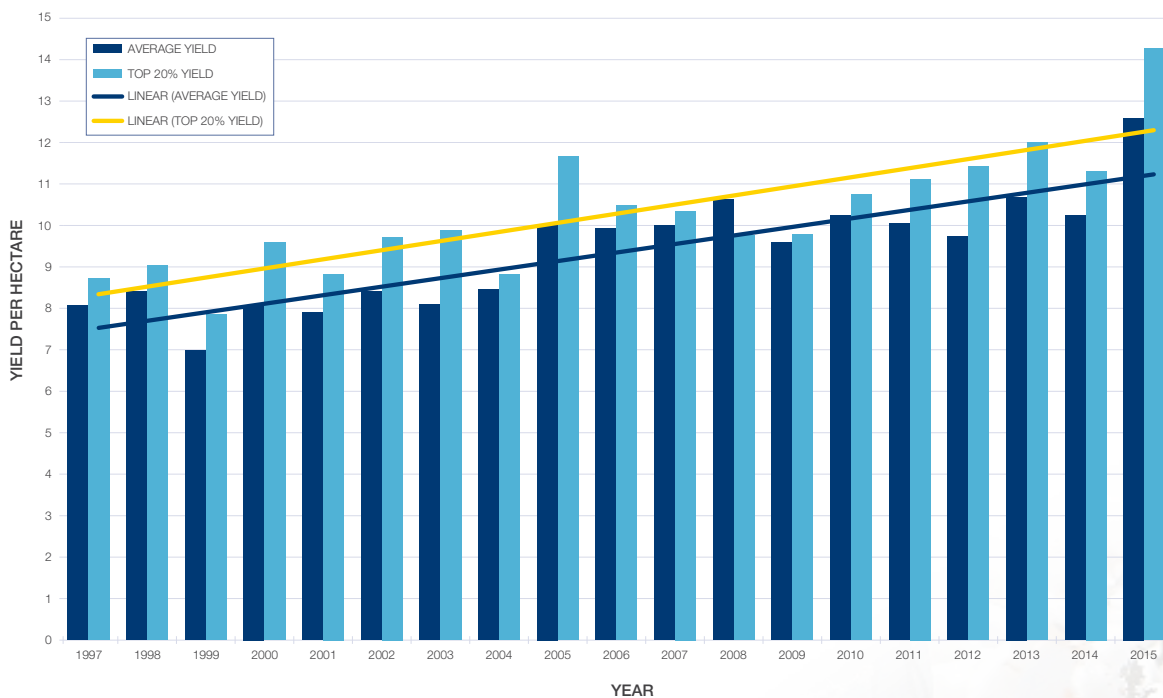
3.3 TOP 20% FARMERS

3.3.1 GRAPHS

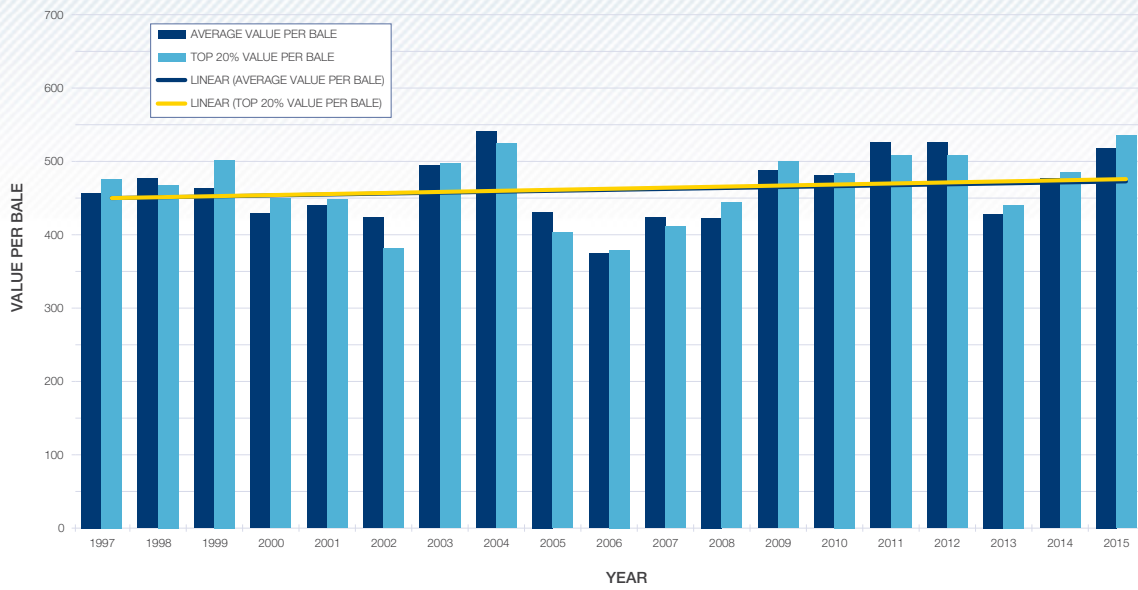
3.3.1.1 COMPARISON OF TOP 20% INCOME & EXPENSE ITEMS FOR LANDHOLDERS



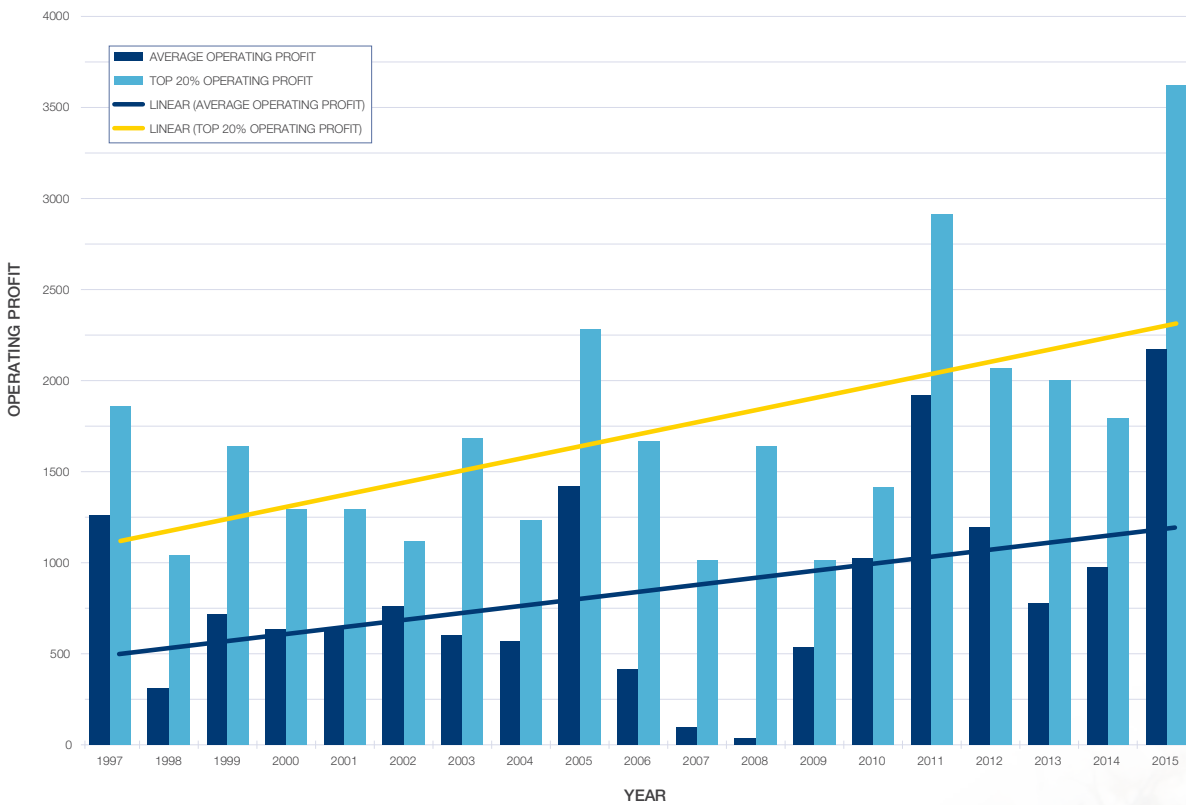
3.3.1.2 COMPARISON OF THE YIELD FOR THE AVERAGE AND THE TOP 20% FOR LANDHOLDERS



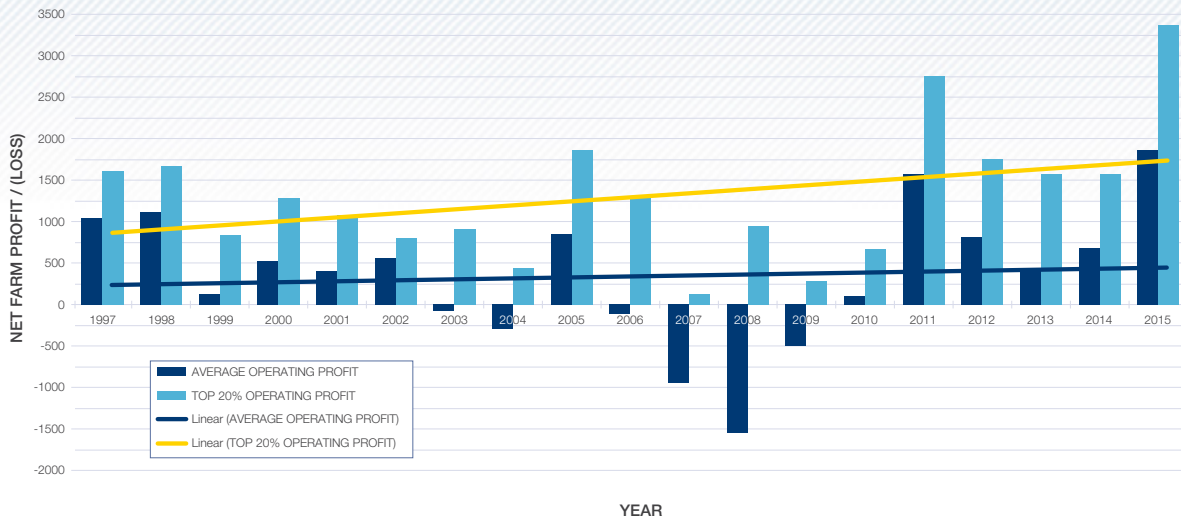
3.3.1.3 COMPARISON OF THE VALUE PER BALE FOR THE AVERAGE AND THE TOP 20% FOR LANDHOLDERS



3.3.1.4 COMPARISON OF THE OPERATING PROFIT FOR THE AVERAGE AND THE TOP 20% FOR LANDHOLDERS



3.3.1.5 COMPARISON OF THE NET FARM PROFIT/(LOSS) FOR THE AVERAGE AND THE TOP 20% FOR LANDHOLDERS



3.3.2 TOP 20% FARMERS - THE PAST TEN YEARS (PER HA)

2006	2007	2008	2009	2010	2011	2012	2013	2014		2015
INCOME										
4,065	3,950	3,997	4,368	5,067	5,659	5,509	5,502	5,270	Cotton proceeds - Lint	7,071
434	848	871	1,081	753	584	484	629	1,046	Cotton proceeds - Seed	1,467
(491)	(508)	(499)	(518)	(581)	(560)	(478)	(740)	(677)	Ginning	(789)
(36)	(38)	(34)	(40)	(37)	(36)	(40)	(49)	(41)	Levies	(54)
163	89	123	188	0	404	112	33	9	Cotton proceeds - Hail claims	0
4,135	4,341	4,458	5,079	5,202	6,051	5,587	5,375	5,607		7,695
EXPENSES										
161	94	125	113	123	148	114	166	113	Cartage	74
144	95	99	77	152	149	125	96	142	Chemical application	148
61	43	63	59	45	50	54	51	57	Chemicals - Defoliant	58
70	117	97	154	108	112	61	66	152	Chemicals - Herbicides	140
293	113	67	160	175	146	89	58	126	Chemicals - Insecticides	174
2	4	6	79	61	12	10	8	4	Chemicals - Others	10
50	70	38	14	14	0	6	4	2	Chipping	1
62	63	49	73	81	60	71	51	61	Consultants	70
57	258	321	201	192	253	292	237	153	Contract picking	144
85	133	126	30	17	97	114	208	154	Contract farming and ripping	152
10	7	3	24	8	51	64	98	90	Cotton picking wrap and sundries	98
142	251	208	298	423	112	183	158	226	Depreciation	411
15	15	16	76	124	115	20	93	13	Electricity	31
262	207	169	422	299	353	544	453	580	Fertiliser	485
224	411	280	444	298	213	233	244	418	Fuel and oil	349
8	0	0	3	0	35	6	16	42	Hire of plant	1
71	207	195	238	204	174	125	94	90	Insurance	159
65	152	259	220	221	298	287	305	300	Licence fee - Bollgard	192
39	22	50	45	60	43	51	42	69	Licence fee - Roundup ready	63
16	37	26	37	36	17	25	14	12	Motor vehicle expenses	14
105	103	64	147	145	87	66	103	118	R & M - Farming plant	146
45	141	70	114	221	54	122	119	174	R & M - Pumps and earthworks	334
75	84	99	112	108	102	136	103	87	Seed	154
28	14	1	107	30	61	126	150	238	Water charges	184
246	484	273	453	428	274	300	269	277	Wages - Employees	338
54	88	29	114	76	20	27	27	8	Wages - Proprietors	12
36	65	32	65	24	50	39	70	29	Administration	33
45	50	56	189	118	51	234	68	31	Other farm overheads	87
2,471	3,328	2,821	4,068	3,791	3,137	3,524	3,371	3,766		4,062
1,664	1,013	1,637	1,011	1,411	2,914	2,063	2,004	1,841	OPERATING PROFIT/(LOSS)	3,633
ADD:										
54	88	29	114	76	20	27	27	8	Wages - Proprietors	12
1,718	1,101	1,666	1,125	1,487	2,934	2,090	2,031	1,849	FARM OPERATING PROFIT/(LOSS)	3,645

3.3.2 TOP 20% FARMERS - THE PAST TEN YEARS (PER HA)

(continued)

2006	2007	2008	2009	2010	2011	2012	2013	2014		2015
DEDUCT:										
429	981	711	872	797	185	353	496	306	Interest and bank charges	257
10	0	0	0	0	0	0	0	0	Interest - Crop terms	0
439	981	711	872	797	185	353	496	306		257
\$1,279	\$120	\$955	\$253	\$690	\$2,749	\$1,737	\$1,535	\$1,543	FARM NET PROFIT/(LOSS)	\$3,388
CROP RESULTS										
921.24	644.33	701.35	556.97	789.00	1,124.75	1,186.93	833.94	2,365.17	Hectares of cotton grown	997.79
9,656.56	6,666.75	6,847.50	5,451.00	8,480.00	12,506.75	13,596.12	9,999.47	27,308.14	Total yield (bales)	14,283.13
10.48	10.35	9.76	9.79	10.75	11.12	11.45	11.99	11.55	Yield per hectare (bales)	14.31
\$378.96	\$410.89	\$443.99	\$499.72	\$484.00	\$507.94	\$477.90	\$445.47	\$484.87	Value per bale	\$537.62
\$235.67	\$321.74	\$288.83	\$415.45	\$352.51	\$282.04	\$307.69	\$281.13	\$326.34	Cost of production per bale	\$283.59
\$158.80	\$97.78	\$167.74	\$103.46	\$131.48	\$262.27	\$180.02	\$167.08	\$159.32	Operating profit per bale	\$254.03
6.52	8.10	6.35	8.14	7.83	6.17	7.37	7.57	7.77	cover operating expenses	7.55
7.68	10.49	7.95	9.88	9.47	6.54	8.12	8.68	8.40	cover total expenses	8.03
LABOUR										
290.92	138.07	280.54	139.24	157.80	176.43	228.26	325.44	337.46	Number of hectares per permanent person (excluding proprietors)	332.60
AVAILABLE TRACTOR HORSE POWER										
470.78	503.09	399.38	520.68	612.59	344.27	244.07	394.85	231.38	Tractor horse power per 500 hectares	469.70
AVAILABLE PICKING CAPACITY										
2.53	2.07	0.00	2.39	1.69	3.39	0.42	1.35	1.55	Picker heads per 500 hectares	3.67
ROTATION										
60.95%	56.91%	39.21%	47.88%	42.25%	70.38%	46.55%	18.32%	39.31%	Percentage of the current years' crop being grown on fallow fields or new fields (developed within the last three years)	77.77%
WATER USAGE										
10.22	9.00	9.00	9.00	9.00	8.60	11.72	9.59	8.11	Megalitres per hectare	6.38
0.97	0.87	0.92	0.92	0.84	0.77	1.02	0.80	0.70	Megalitres per bale	0.45

3.4 FIVE YEAR AVERAGE FOR TOP 20% AND AVERAGE PARTICIPANTS (PER HA) (2011, 2012, 2013, 2014, 2015)

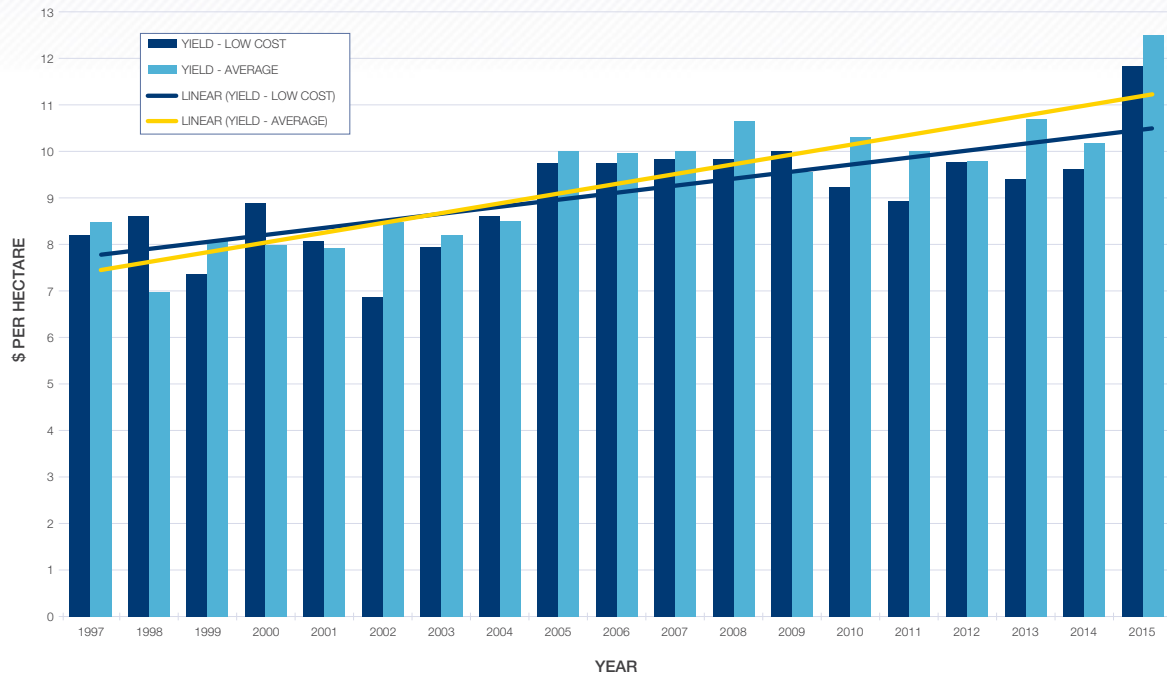
	ALL FARMS AVERAGE	TOP 20% AVERAGE	DIFFERENCE
INCOME			
Cotton proceeds - Lint	5,135	5,802	667
Cotton proceeds - Seed	691	842	151
Ginning	(598)	(649)	(51)
Levies	(40)	(44)	(4)
Cotton proceeds - Hail claims	52	112	60
	5,240	6,063	823
EXPENSES			
Cartage	115	123	(8)
Chemical application	134	132	2
Chemicals - Defoliants	52	54	(2)
Chemicals - Herbicides	102	106	(5)
Chemicals - Insecticides	91	119	(28)
Chemicals - Others	7	9	(2)
Chipping	2	3	(0)
Consultants	52	63	(10)
Contract picking	206	216	(9)
Contract farming and ripping	141	145	(4)
Cotton picking wrap and sundries	79	80	(1)
Depreciation	234	218	16
Electricity	61	54	6
Fertiliser	492	483	9
Fuel and oil	338	291	46
Hire of plant	38	20	18
Insurance	123	128	(6)
Licence fee - Bollgard	293	276	16
Licence fee - Roundup ready	59	54	5
Motor vehicle expenses	20	16	4
R & M - Farming plant	125	104	21
R & M - Pumps and earthworks	130	161	(30)
Seed	117	116	1
Water charges	217	152	65
Wages - Employees	397	292	106
Wages - Proprietors	23	19	4
Administration	59	44	15
Other farm overheads	125	94	31
	3,832	3,572	260
OPERATING PROFIT/(LOSS)	1,408	2,491	1,083
ADD:			
Wages - Proprietors	23	19	(4)
FARM OPERATING PROFIT/(LOSS)	1,430	2,510	1,077

3.4 FIVE YEAR AVERAGE FOR TOP 20% AND AVERAGE PARTICIPANTS (PER HA) (2011, 2012, 2013, 2014, 2015) (CONTINUED)

	ALL FARMS AVERAGE	TOP 20% AVERAGE	DIFFERENCE
DEDUCT:			
Interest and bank charges	352	319	32
Interest - Crop terms	2	0	2
	354	319	34
FARM NET PROFIT/(LOSS)	\$1,077	\$2,190	\$1,114
CROP RESULTS			
Hectares of cotton grown	1,109.18	1,301.72	192.53
Total yield (bales)	14,960.44	15,538.72	578.28
Yield per hectare (bales)	10.65	12.08	1.43
Value per bale	\$486.12	\$490.76	\$4.64
Cost of production per bale	\$360.34	\$296.16	\$64.18
Operating profit per bale	\$130.92	\$204.54	\$73.63
Number of bales per hectare required to cover operating expenses	7.92	7.29	0.64
Number of bales per hectare required to cover total expenses	8.66	7.95	0.71
LABOUR			
Number of hectares per permanent person (excluding proprietors)	235.92	280.04	(44.12)
AVAILABLE TRACTOR HORSE POWER			
Tractor horse power per 500 hectares	323.41	336.85	(13.44)
AVAILABLE PICKING CAPACITY			
Picker heads per 500 hectares	2.25	2.08	0.17
ROTATION			
Percentage of the current years' crop being grown on fallow fields or new fields (developed within the last three years)	49.28%	50.47%	1.18%
WATER USAGE			
Megalitres per hectare	8.71	8.88	(0.17)
Megalitres per bale	0.83	0.75	0.08

3.5 LOW COST FARMERS

3.5.1 GRAPH - COMPARISON OF EXPENSES AND YIELD FOR LOW COST AND AVERAGE LANDHOLDERS



3.5.2 LOW COST FARMERS – THE PAST 10 YEARS

2006	2007	2008	2009	2010	2011	2012	2013	2014		2015
INCOME										
3,754	3,669	3,997	4,769	4,268	4,508	4,749	4,313	4,444	Cotton proceeds - Lint	5,699
382	757	871	1,078	718	440	382	302	746	Cotton proceeds - Seed	1,156
(444)	(468)	(499)	(520)	(498)	(445)	(561)	(523)	(604)	Ginning	(710)
(26)	(35)	(34)	(46)	(30)	(29)	(31)	(28)	(51)	Levies	(56)
103	106	123	0	0	350	9	27	4	Cotton proceeds - Hail claims	7
3,769	4,029	4,458	5,281	4,458	4,824	4,548	4,091	4,539		6,096
EXPENSES										
123	81	125	171	91	122	88	121	100	Cartage	109
130	98	99	144	123	129	116	80	132	Chemical application	140
52	43	63	60	79	69	58	49	48	Chemicals - Defoliants	58
60	121	97	193	89	108	69	66	99	Chemicals - Herbicides	101
281	132	67	26	140	80	61	47	74	Chemicals - Insecticides	109
2	4	6	4	5	11	10	5	3	Chemicals - Others	5
71	70	38	11	14	0	2	0	1	Chipping	1
55	55	49	64	62	57	38	35	44	Consultants	16
124	302	321	339	361	258	295	90	246	Contract picking	169
91	104	126	23	29	64	130	380	102	Contract farming and ripping	33
12	6	3	38	3	43	61	72	61	Cotton picking wrap and sundries	90
126	176	208	191	332	141	179	207	189	Depreciation	269
9	12	16	29	7	66	33	29	21	Electricity	37
312	188	169	174	518	296	448	410	505	Fertiliser	444
242	356	280	272	347	201	202	299	337	Fuel and oil	284
6	0	0	1	3	11	52	67	70	Hire of plant	21
121	244	195	228	148	141	119	45	104	Insurance	87
107	110	259	310	308	315	281	175	317	Licence fee - Bollgard	277
9	19	50	60	53	55	53	29	67	Licence fee - Roundup ready	66
11	30	26	33	33	18	15	28	15	Motor vehicle expenses	18
115	89	64	110	147	77	80	60	115	R & M - Farming plant	84
59	107	70	86	88	58	49	51	79	R & M - Pumps and earthworks	124
68	85	99	114	160	101	165	104	75	Seed	133
21	9	1	26	13	144	181	192	308	Water charges	303
245	415	273	659	286	285	287	193	319	Wages - Employees	525
36	62	29	0	49	7	22	33	13	Wages - Proprietors	8
29	43	32	66	43	38	48	42	56	Administration	55
44	60	56	80	43	65	38	97	62	Other farm overheads	77
2,561	3,021	2,821	3,512	3,574	2,960	3,180	3,006	3,562		3,643
1,208	1,008	1,637	1,769	884	1,864	1,368	1,085	977	OPERATING PROFIT/(LOSS)	2,453
ADD:										
36	62	29	0	49	7	22	33	13	Wages - Proprietors	8
1,244	1,070	1,666	1,769	933	1,871	1,390	1,118	990	FARM OPERATING PROFIT/(LOSS)	2,461

3.5.2 LOW COST FARMERS – THE PAST 10 YEARS (continued)

2006	2007	2008	2009	2010	2011	2012	2013	2014		2015
DEDUCT:										
379	976	711	76	1,418	333	345	543	357	Interest and bank charges	194
7	0	0	0	0	0	0	65	0	Interest - Crop terms	0
386	976	711	76	1,418	333	345	608	357		194
\$858	\$94	\$955	\$1,693	(\$485)	\$1,538	\$1,045	\$510	\$633	FARM NET PROFIT/(LOSS)	\$2,267
CROP RESULTS										
1,453.60	812	701	568	713	1,276	1,532	1,014	1,934	Hectares of cotton grown	1,242
14,042.00	7,886.50	6,847.50	5,676.00	6,535.00	11,428.00	14,857.26	9,539.47	18,683.35	Total yield (bales)	14,707.30
9.66	9.72	9.76	9.99	9.17	8.95	9.70	9.41	9.66	Yield per hectare (bales)	11.84
\$379.55	\$403.66	\$443.99	\$528.61	\$486.02	\$499.65	\$468.02	\$431.96	\$469.31	Value per bale	\$514.36
\$264.95	\$310.51	\$288.83	\$351.21	\$389.29	\$330.42	\$327.83	\$319.61	\$368.46	Cost of production per bale	\$307.83
\$125.28	\$104.07	\$167.74	\$177.40	\$96.73	\$208.27	\$141.11	\$115.23	\$101.28	Operating profit per bale	\$207.08
6.74	7.48	6.35	6.64	7.35	5.92	6.79	6.96	7.58	Number of bales per hectare required to cover operating expenses	7.09
7.76	9.89	7.95	6.78	10.26	6.59	7.53	8.37	8.35	Number of bales per hectare required to cover total expenses	7.46
LABOUR										
242.27	162.30	280.54	94.67	237.50	168.91	283.74	368.71	443.85	Number of hectares per permanent person (excluding proprietors)	161.94
AVAILABLE TRACTOR HORSE POWER										
393.36	514.76	399.38	510.56	561.40	306.11	279.82	427.01	190.12	Tractor horse power per 500 hectares	432.90
AVAILABLE PICKING CAPACITY										
1.83	0.00	0.00	0.00	0.00	2.31	1.57	1.60	0.48	Picker heads per 500 hectares	2.76
ROTATION										
66.72%	49.29%	39.21%	70.42%	35.09%	70.67%	33.99%	19.32%	23.82%	Percentage of the current years' crop being grown on fallow fields or new fields (developed within the last three years)	52.80%
WATER USAGE										
9.19	9.00	9.00	9.00	9.00	8.67	10.45	7.53	7.30	Megalitres per hectare	8.22
0.95	0.93	0.92	0.90	0.98	0.97	1.08	0.80	0.76	Megalitres per bale	0.69

4

Appendices



APPENDIX A

DEFINITION OF TERMS

TOP 20% AND BOTTOM 20% (AVERAGE)

These figures represent the average results of those farmers who achieved the highest and lowest farm operating profit (after using an average cotton price for all growers).

BEST 'LOW COST' FARMERS

These figures represent the average results of those farmers who had the lowest farm operating expenses (before interest).

LARGE GROWERS

These figures represent the average results of those farmers who grew more than 2,500 hectares.

COMBINED AVERAGE OF FIVE YEARS TO 2015

These figures represent the average of the annual results of farmers in each category of the comparative analysis, over a five year period. We have also analysed the combined average of the Top 20% of farmers for comparative purposes.

LABOUR

These figures include all permanent employees or equivalent casuals (two casuals employed for three months each would represent half of a permanent employee). Proprietors have been excluded.

AVAILABLE TRACTOR HORSE POWER (ENGINE)

Includes all field tractors used for ripping, listing, spraying and cultivating, but excludes tractors used to operate module builders.

AVAILABLE PICKING CAPACITY

Only includes pickers owned by the farmer.

ROTATION

The portion of the current year's crop grown on fields fallowed in the previous year, or developed over the past four years, expressed as a percentage.

WATER USAGE

Includes the total megalitres of irrigation water used to grow the crop as well as the impact of beneficial rain. Rainfall figures during the growing season have been converted to megalitres after excluding light falls and a portion of falls over 100mm per month.

APPENDIX B

GUIDE TO INCOME AND EXPENSE ALLOCATIONS

COTTON PROCEEDS

The 'Cotton Proceeds – Lint' is net of premiums and discounts.

For farmers who received hail insurance claims, the amount received has been shown separately in the analysis. Where possible the hail claim has been grossed up to reflect the bales lost due to hail and the costs saved or additional costs incurred have been added or subtracted to reflect comparable figures.

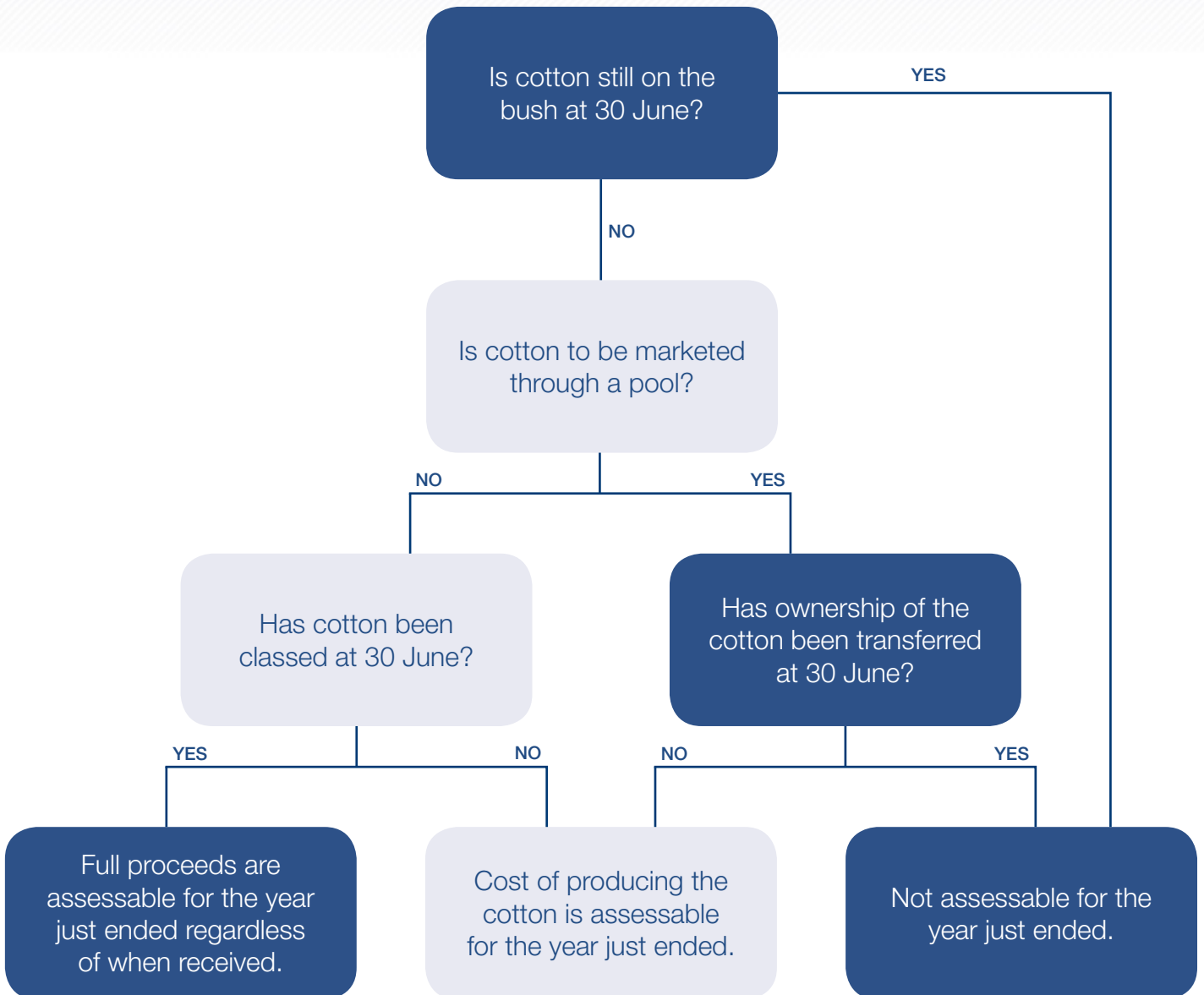
EXPENSES

Cartage	cartage (cotton module cartage, general cartage)
Chemical application	application by aircraft, application by ground rig
Chemicals – Defoliants	all defoliants and conditioners
Chemicals – Herbicides	herbicides used in field and on ditches, channels etc.
Chemicals – Insecticides	all insecticides
Chemicals – Other	growth regulants (pix) and all other chemicals
Chipping	chipping (chipping contractors, chipping wages), row weeders
Consultants	consultants (external and internal agronomist, bug checkers, marketing consultants)
Contract picking	contract picking (net of contract picking income on a swap basis, ie. hectare for hectare)
Contract farming and ripping	contract farming, contract ripping, contract stalk pulling, stick picking
Cotton wrap and picking sundries	cotton wrap and sundries (tarps and ropes, repairs to tarps)
Depreciation	depreciation
Electricity	electricity (electricity for bores, general electricity)
Fertiliser	fertiliser, gypsum
Fuel and oil	fuel and oil (net of diesel fuel rebate)
Hire of plant	hire of plant
Insurance	crop insurance, general insurance
Licence fee – Bollgard	licence fees paid to Monsanto for the Bollgard licence
Licence fee – Roundup Ready	licence fees paid to Monsanto for the Roundup Ready licence
Motor vehicle expenses	motor vehicle expenses (registration, motor vehicle insurance, R & M motor vehicle)

R & M – Farming plant	R & M pickers, R & M plant, R & M tractors, R & M small tools and hardware, R & M motor bikes
R & M – Pumps and earthworks	R & M irrigation earthworks, R & M irrigation pumps and motors
Seed	seed
Water charges and Purchases	water charges (charges from a state body, charges from a local water scheme, water purchases)
Wages – Employees	external wages (excluding chipping), payroll tax, secretarial fees, superannuation, workers compensation insurance, FBT
Wages – Proprietors	wages paid to a proprietor. If no wage is paid a notional amount, based on their involvement in the operation, has been included for each working proprietor. If the farm has more than one enterprise, the proprietors wage is split in accordance with normal allocation criteria
Administration	accountancy (all general work), administration, advertising, computer costs, computer processing, entertainment, filing fees, licences permits and fees, medical supplies, newspapers and periodicals, printing stationery and postage, protective clothing, seminars and conferences, staff amenities, staff training, subscriptions and donations, telephone, travel and accommodation
Other farm overheads	special accountancy work, audit, legal, rates, rent, R & M homestead, R & M employees' houses, R & M farm buildings, R & M fences, shade and shelter trees
Interest and bank charges	bank charges, borrowing expenses, bank interest, leasing, and hire purchase interest charges
Interest – Crop terms	interest on crop term finance (chemical suppliers and cotton merchants etc)

APPENDIX C

CHART OF ASSESSIBILITY OF COTTON PROCEEDS



Notes:

- The guaranteed minimum price of a GMP pool is assessable as cash. The balance is treated as a pool.
- 'Cost of producing' is the cost of severing the cotton from the land plus any other costs spent directly on the lint or seed prior to 30 June of that year.

The marketing of cotton is a complex issue. The taxation treatment relies on the wording of a particular contract.

This schedule is designed to provide general advice only. If you need specific advice, please contact us.

On this basis, we accept no liability for any errors or omissions.

APPENDIX D

COMMON SHAREFARMING AND LEASING ARRANGEMENTS

Below are some details of common practices.

- **Sharefarming (80% – 20% deal)**

80% of income to the sharefarmer.

20% of income to the landholder.

- Sharefarmer pays all operating costs.
- Landholder pays landholder's costs (rates) and costs to deliver water to the head ditch (pumping, water charges, and main channel maintenance).

- **Sharefarming (82% – 18% deal)**

82% of income to the sharefarmer.

18% of income to the landholder.

- Sharefarmer pays all costs except rates.

- **Leasing**

- A starting point is generally 4% – 6% of the value of the full watered developed area.



Australian Government
**Cotton Research and
Development Corporation**

Cotton Research and Development Corporation

2 Lloyd St
(PO Box 282)
Narrabri NSW 2390
Tel: (02) 6792 4088
Fax: (02) 6792 4400
Email: crdc@crdc.com.au

www.crdc.com.au



Boyce Chartered Accountants - Moree

39 Albert Street
(PO Box 614)
Moree NSW 2400
Tel: (02) 6752 7799
Fax: (02) 6752 7130
Email: infomoree@boyceca.com

www.boyceca.com

Rural and Regional Affairs and Transport Legislation Committee

ANSWERS TO QUESTIONS ON NOTICE

Additional Estimates February 2016

Agriculture and Water Resources

Question: 124

Division/Agency: Cotton Research and Development Corporation (CRDC)

Topic: Priorities and statistics

Proof Hansard page: Written

Senator STERLE asked:

1. The cotton industry has faced difficult seasonal conditions; can you outline the research priorities for CRDC?
2. Can you provide current statistics on Australia's Total Factor Productivity for the cotton industry?

Answer:

1. The Cotton Research and Development Corporation (CRDC) has five strategic research priorities.
 - i. Ensuring cotton growers are profitable through protecting against pests, optimising input efficiencies, applying new technologies and increasing yield.
 - ii. Assisting the Australian cotton industry to be leaders in sustainable agriculture through adoption of best practices, stewardship of its production inputs (e.g. chemicals and biotechnology), effective biosecurity and responsible landscape management.
 - iii. Enabling the Australian cotton industry to capture greater value from its products through quality assurance, differentiation and/or novel transformation.
 - iv. Investing in a skilled, educated and progressive workforce who can drive the industry forward through enabling workforce development, networks and communication.
 - v. Measuring the performance of the Australian cotton industry and its Research Development & Extension (RD&E) to drive continuous improvement.
2. The CRDC is not aware of any analysis of total factor productivity (output/input) for the cotton industry. The CRDC monitors productivity growth (output) and profitability trends (gross margin) through benchmarking since 1997. Please refer to the attached pre-publication version of the Australian Cotton Comparative Analysis (Attachment A).

AUSTRALIAN COTTON COMPARATIVE ANALYSIS

2015 CROP



Australian Government
Cotton Research and
Development Corporation



Knowledge. Insight. Experience.

© Cotton Research and Development Corporation June 2014

ISBN 978-0-9923758-7-4

This work is copyright. Apart from any use permitted under the Copyright Act, 1968, no part may be reproduced by any process without the written permission of Cotton Research and Development Corporation.

Cotton Research and Development Corporation

2 Lloyd St (PO Box 282)

Narrabri NSW 2390

ABN 71 054 238 316

Executive Director: Bruce Finney
R & D Investment: Ian Taylor
Business & Finance: Graeme Tolson
Telephone: 02 6792 4088
Facsimile: 02 6792 4400
Email: crdc@crdc.com.au
Website: www.crdc.com.au

Boyce Chartered Accountants

Moree	David Newnham	02 6752 7799	dnewnham@boyceca.com
	Paul Fisher	02 6752 7799	pfisher@boyceca.com
	Phil Alchin	02 6752 7799	palchin@boyceca.com
Cooma	Jonathan Forrest	02 6452 3344	jforrest@boyceca.com
Dubbo	Bernard Kennedy	02 6884 6499	bkennedy@boyceca.com
	Scott Christian	02 6884 6499	schristian@boyceca.com
	Caroline Wilcher	02 6884 6499	cwilcher@boyceca.com
	Mike Nangle	02 6884 6499	mnangle@boyceca.com
Goulburn	Peter King	02 4821 1466	pking@boyceca.com
Wagga Wagga	Simon Sellars	02 6971 0600	ssellars@boyceca.com
	Linda Mackellar	02 6971 0600	lmackellar@boyceca.com

Images courtesy of Cotton Australia

Dear Grower,

We are pleased to present the 2015 Australian Cotton Comparative Analysis.

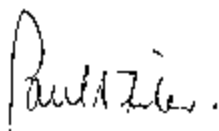
The Comparative Analysis is a joint initiative between the Cotton Research & Development Corporation (CRDC) and Boyce Chartered Accountants to produce the industry benchmark for the economics of cotton growing in Australia.

The sample of participants this year again captures a representation from the different cotton-growing valleys. It is always our aim to increase the sample size of the analysis. If you are a grower and find this report instructive but do not currently participate in the analysis, we would welcome your involvement. Participation is free, and while we know that involvement does take some effort, we believe that this effort leads to a greater understanding of the numbers that drive your business with respect to other growers and trends within the industry.

Whilst the report focuses on the 2015 crop, it also presents trends that have been measured against more than ten years of data.

The report has been posted on the websites of Boyce Chartered Accountants (www.boyceca.com) and CRDC (www.crdc.com.au). We welcome use of the figures contained in this report, however it should be noted that the report or any part of it may not be published or reproduced without authorisation.

We look forward to discussing the report with you.



Paul Fisher
Director
Boyce Chartered Accountants
Moree



Bruce Finney
Executive Director
CRDC
Narrabri



2015 AUSTRALIAN COTTON COMPARATIVE ANALYSIS

CONTENTS

1	INTRODUCTION	X
2	REPORT ON THE 2015 CROP	X
	2.1 ANALYTICAL REVIEW	X
	2.1.1 Introduction	
	2.1.2 Key performance indicators	
	2.1.3 Five year averages to 2015	
	2.1.4 Other observations	
	2.1.5 Features of the Top performers	
	2.2 RETURN ON ASSETS	X
	2.2.1 What return on assets am I getting?	
	2.2.2 Why measure ROA?	
	2.3 CONCLUSION	X
3	COMPARATIVE STATISTICS	X
	3.1 PARTICIPANTS	X
	3.1.1 Comparison of average income and expense items for the 2015 year	
	3.2 AVERAGE	X
	3.2.1 Graphs	
	3.2.1.1 Comparison of average income and expense items	
	3.2.1.2 Yield and trendline for the Average landholders	
	3.2.1.3 Value per bale and trendline for the Average landholders	
	3.2.2 Comparison of average income and expense items for the past ten years	
	3.2.3 Comparison of average results between the 2015 and 2014 year	
	3.2.4 Comparison of the Average of the different valleys	
	3.3 TOP 20% FARMERS	X
	3.3.1 Graphs	
	3.3.1.1 Comparison of Top 20% income and expense items	
	3.3.1.2 Comparison of the yield for the Average and the Top 20%	
	3.3.1.3 Comparison of the value per bale for the Average and the Top 20%	
	3.3.1.4 Comparison of the operating profit for the Average and the Top 20%	
	3.3.1.5 Comparison of the net farm profit/(loss) for the Average and the Top 20%	
	3.3.2 The past ten years	
	3.4 FIVE YEAR AVERAGE FOR TOP 20% AND AVERAGE PARTICIPANTS	X
	3.5 LOW COST FARMERS	X
	3.5.1 Graph – Comparison of yield for low cost and average	
	3.5.2 The past ten years	
4	APPENDICES	X
	Appendix A – Definition of terms	
	Appendix B – Guide to income and expense allocations	
	Appendix C – Table on assessability of cotton proceeds	
	Appendix D – Common sharefarming and leasing arrangements	

1

Introduction



INTRODUCTION

The 2015 Australian Cotton Comparative Analysis (ACCA) is the eleventh report produced by Boyce Chartered Accountants in conjunction with the Cotton Research & Development Corporation (CRDC). From 1986 to 2004 the report was compiled independently by Boyce.

In this report we present an analytical review of the 2015 results, a comparison with prior years, and comments on emerging trends.

The primary purpose of the ACCA is to show the income and expenses associated with growing fully irrigated cotton on a per hectare basis. There are some provisos however to be aware of when considering information contained in this report:

- It is important to note that the analysis does not necessarily show the health of the cotton industry. Where a cotton grower grew skip row cotton or solid cotton that did not receive full water, or grew no fully irrigated cotton at all, those resulting figures are excluded from the analysis. In most, if not all cases, these alternate crops would have returned a reduced profit per hectare in comparison to growing fully irrigated cotton. Therefore, although the grower may have made a healthy per hectare profit on the hectares of fully irrigated solid cotton grown, the net profit of the total farm would have been significantly less than if fully irrigated cotton was grown across the full area, allowing for usual rotation practice.
- Readers of this study should be aware that these figures show the average results of participants in the sample. It is important that users understand this fully. For example, assume there were only two participants in the sample growing the same area. If one uses contractors for picking and the other owns their own pickers, the figure for contract picking will be approximately 50% of the market rate. Similarly, the figures on a per line basis for expenses such as depreciation, repairs and maintenance, wages etc. will all be less than market rates. With this knowledge, users of this information can get additional information from this analysis.
- It should be remembered that if there is a significant change in per line figures, this may not necessarily be due to price increase. Line items can be made up of price, frequency of operation and volume per operation. So where there has been an increase in, for example seed, this could be due to price, number of seeds per metre planted or the number of plantings, or a combination of all three.
- It is important to understand that where a crop has not been picked due to flooding or some other disaster other than hail, the expenses relating to the affected area have been excluded from the sample. This is worth noting given the extent of flooding this season.

So care should be taken when using the results from this analysis. Understanding the basis on which the analysis is constructed is the key to getting the most out of its study.

OUR SAMPLE

The analysis includes the results for farmers who were able to plant, grow and pick their crop using close to normal irrigation practices. This year the total number of hectares in the sample decreased due to a decrease in the availability of water throughout many of the cotton growing areas of Australia.

There has been an increase in participants from the southern valleys as the industry continues to expand in those areas.

The average hectares planted per participant decreased from 1,593 hectares in 2014 to 926 hectares in 2015. This is due to water availability and participants in the analysis changing. The total number of bales in the sample was just on 340,000, which is approximately 15% of total Australian cotton production. Final estimates for the 2015 Australian crop were 197,000 hectares and production of 2,200,000 bales as at January 2016 (Cotton Australia Statistics).

Marketing is an important part of management and can make a significant contribution to the profitability of the cotton farm. For this reason, participants' overall results in the 'Comparison of average income and expense items' are not normalised in respect of income. Whilst recognising marketing as an important part of management, our study does not include or exclude growers from the Top 20% Group based on marketing decisions in respect of currency, lint and basis. Our view is that growers should be classified into (or out of) this group based on yield and cost only, as many growers review their operation against the Top 20% Group to look for areas of improvement. We have therefore selected the Top 20% using a substituted price of \$517 per bale (the average 2015 net price for all participants) instead of using the actual average net price that the individual grower actually received.

Although the average price was used to select the participants in the Top 20% Group, the growers' actual sales figures (including marketing) are reported in this analysis.

THE NEED TO BENCHMARK

Financial analysis using comparative statistics helps farmers identify relative strengths and weaknesses; accompanying budgets and long term business plans will then focus on ways to overcome weaknesses and build on strengths. In other words, this Comparative Analysis is a management tool to implement change and to identify where effort should be directed on a day to day basis.

Obviously, this analysis does not provide all the answers – it is a benchmark or a standard to strive for. It is up to management to develop and implement specific action plans based on improved knowledge to set and achieve new goals.

The reliable, independent figures in the Comparative Analysis provide the starting point for farmers to develop "best practice".

If growers or other interested parties require more long term data, note that this analysis has been running (on much the same basis as it is today) since 1986.

We encourage participants to discuss the results with us and to clarify any queries so that we all develop a deeper understanding of the industry.

2

Report on
the 2015 Crop



2 REPORT ON THE 2015 CROP

2.1 ANALYTICAL REVIEW

2.1.1 INTRODUCTION

The 2015 year was generally an ideal irrigated cotton season in terms of weather. Enough heat, rainfall at ideal times with little prolonged cloud and low cold shock days all contributed to a very kind season for growers. The general rain over Eastern Australia towards the end of December was welcome.

In summary, the 2015 growing season will be remembered for the following;

- Reduced plantings due to minimal stored water;
- Water budgeting continuing to be difficult;
- General rain at the end of December; and
- Good quality cotton and low discounts.

With reduced areas planted and grown, overheads are once again spread over reduced hectares, increasing cost per hectare.

Significant lifts in yield, water availability and the growth of cotton area in the Southern Valleys are the big stories in the industry.

In prior years' analyses we have reviewed the impact on profit of lack of stored water. While this may be self-evident, there are also less visible impacts, such as the reduced time available for a grower to price a crop. Usually it is considered prudent to forward sell a crop only when production is relatively certain. In the case of irrigated cotton, this would be when there is available water in storage. With little water in storage, the ability to forward sell (say for a period of three years) would be limited which would, in turn, limit the ability to obtain an excellent price. So lack of water and consequently production is reducing the ability of growers to **take advantage of higher prices in the three years prior to production.**

While most valleys are facing reduced and variable plantings, the Riverina is looking at more stable production. The industry continues to gain momentum in that valley, with many first time growers and other irrigators analysing the profitability of cotton versus other irrigated crops. It is important that these analyses with respect to other crops are carried out in a 'like for like' manner. Inevitably, growers from other established valleys look to the emerging area and compare it to other valleys. On the face of it, the price of what could be termed a 'reliable megalitre' of general security water is cheap in relation to other, more established valleys. There is, of course, more to the analysis than that.

Although there was a wet pick in 2014, we have not seen compaction issues manifest in the 2015 crop, mainly due to rotation.

The 2016 production is estimated at 2.4 million bales on plantings of 270,000 hectares (Cotton Australia Statistics). The ongoing business question here is one of trying to grow similar hectares each year versus maximising yearly production when the water is there.

Discounts due to lint quality were lower this year, due to prolonged dry conditions over the picking period and reduced heatwave conditions.

For the Average Group:

- Yield (12.59 bales per hectare) increased by over 2 bales from the previous year (10.24 bales per hectare) and is just on 2 bales per hectare greater than the five year average.
- Price achieved per bale was \$517 per bale which was \$31 above the five year average.
- The resulting total income was \$1,285 higher than the five year average and \$1,621 higher than the 2014 year.
- Fertiliser and Fuel costs continue to hold at around \$480 and \$377 per hectare respectively, with Chemicals – Defoliants and Chemicals – Insecticides up this year compared to 2014.

For the Average Group, this was a great season, with profit per hectare of \$1,899 being better than 2014 (\$711) and greater than the five year average. Based on these figures, a yield of 8.99 bales per hectare is required to cover total expenses.

For the Top 20% Group:

- Average yield was 14.31 bales per hectare, an increase of over 2.5 bales per hectare from the previous year (2014: 11.55 bales per hectare).
- This group achieved an average price of \$537, which is \$53 up from 2014 and \$47 above the five year average.
- This group continues to grow more cotton (1.7 bales per hectare) than the Average Group and do it more cheaply (\$4,062 v \$4,363).

It was also an excellent season for the Top 20% Group, with profit of \$3,388 per hectare compared to a five year average of around \$2,190. This result was a combination of a huge jump in yield, a great price but with increased expenses. It would be worthwhile to further analyse the increase in costs excluding costs directly associated with the increase in yield.

The big jump in average yield this year with respect to 2014 will reinforce the upward trend for yield in the industry.

In our view, the main focus for growers has to be the low cost options that have the biggest impact on the bottom line. While this may be self-evident, it deserves some serious structured and documented thought by the industry.

This study has continually shown that being in the Top 20% is predominately driven by yield. 'How can I improve yield as cheaply as possible?' should be a well-considered question, and one which has been raised before. Specifically though, in this 2015 year, if you look at the increase in expenses that was not specifically driven by yield, how much of that contributed to yield? We believe this question requires some detailed analysis by all growers.

The industry continues to be an early adopter of technology. At the industry level, this is a tremendous positive as it shows the innovation that has driven the industry. However, from a profit perspective, individual growers need to know where their profit comes from, as the early adoption of technology at the micro-level is not always conducive with maximising profit. We believe each technology adoption needs to be framed initially around ongoing cost minimisation or yield maximisation, and secondly from the point of view of the initial capital cost and other benefits. This equation needs to be kept in perspective but the answer could be different for each grower.

The cost of Chipping continues to reduce such that it is now a negligible expense. Similarly, the use of old picking technology continues to decrease. The reduction in License Fee – Bollgard indicates a significant decrease in the amount of Bollgard cotton grown in 2015. In our view growers are ‘hedging their bets’ with growing less Bollgard, while others continue to grow 100% Bollgard in the main because it’s easy. This is the great thing about analysing an industry over time, with some costs phasing out over time and others changing very quickly. We recommend that growers spend some time thinking about where the industry is headed in an attempt to be ahead of the game in the two main areas that impact profit – maximising yields and ensuring costs are at a minimum.

This year we have again included trend lines in some of the graphs presented. Some interesting trends from 1997 to 2015 have emerged, including:

- The value per bale continues to increase slightly, although we have seen no real growth.
- The trendline in growth of cost per hectare continues to rise. This is partly driven by yield increase, partly by a smaller percentage of the farm being used to grow cotton and partly by pure increase in cost.
- The yield per hectare, which up to 2014 was increasing at a reduced rate, has increased significantly in 2015, pushing the trendline upwards.
- This years’ significant increase in operating profit per hectare for the Average Group and the Top 20% Group has also pushed this trendline up, from a flatter position to 2014. This impact was more pronounced for the Top 20% Group.

The two statistics of relatively static price per bale and increasing costs per unit of inputs acquired confirm the decreasing terms of trade for the industry. Therefore the pressure is on the grower to continually lift production across the full area grown.

Five Year Average (2011 to 2015)

We believe the message of the average for a number of years is important. In this report we have used the average of this season and the past four seasons – five years in total.

In previous reports we have sometimes used less years for the average to try and reduce the impact of drought on the numbers.

What we are attempting to show by the five year average is the income and expenses on a per hectare basis in a 'normal' year.

2.1.2 KEY PERFORMANCE INDICATORS

2.1.2.1 YIELD (BALES / HA)

	<u>AVERAGE</u>	<u>TOP 20%</u>	<u>DIFF</u>
2015	12.59	14.31	1.72
2014	10.24	11.55	1.31
2013	10.69	11.99	1.30
2012	9.71	11.45	1.74
2011	10.04	11.12	1.08
* Five year average	10.65	12.08	1.43



What is your water use efficiency in terms of bales per megalitre?
 Do your employees know your yield expectations?
 Have you reviewed your strategies depending on the availability of water?
 What was your maximum yield in a field and do you know why the other fields or areas did not perform as well?

2.1.2.2 VALUE (\$ / BALE) (LINT AND SEED LESS GINNING AND LEVIES)

	<u>AVERAGE</u>	<u>TOP 20%</u>	<u>DIFF</u>
2015	\$517	\$538	\$21
2014	\$473	\$485	\$12
2013	\$427	\$445	\$18
2012	\$486	\$478	(\$8)
2011	\$526	\$508	(\$18)
* Five year average	\$486	\$491	\$5

- The lint price was between \$410 and \$480/bale in the first half of the growing season, peaking at around \$550 per bale around February. The price then slipped away to below \$500 in May.
- The average lint price for the growing period was just on \$480 per bale. (Data provided by Independent Commodity Management)
- The price of seed had a significant impact on the 2015 result. The average price per tonne was around \$90 in 2015 versus a five year average of just on \$60 per tonne.



What strategies do you have in place to combat adverse currency and futures?
 How much cotton have you sold for the 2016 and 2017 crops?
 How do you forward market when there is some water security?
 Do you understand all the strategies that are available?
 Has the worry and risk of your marketing strategy been worth the benefit you have gained?
 Have we seen a change in the way cotton is marketed?

2.1.2.3 OPERATING COSTS (\$ / HA)

	<u>AVERAGE</u>	<u>TOP 20%</u>	<u>DIFF</u>
2015	\$4,363	\$4,062	\$301
2014	\$3,918	\$3,766	\$152
2013	\$3,808	\$3,371	\$437
2012	\$3,601	\$3,524	\$77
2011	\$3,472	\$3,137	\$335
* Five year average	\$3,832	\$3,572	\$260

- The costs for the Average Group increased on the previous year by \$445/ha, which is significant. The only direct costs that decreased in 2015 compared to 2014 were Contract Picking, Fertiliser and License Fees – Bollgard. The biggest increases in direct costs were seen in Seed, Electricity, Chemicals – Insecticides and Water Charges and Purchases.
- There was a large range with the operating costs varying between \$3,022/ha and over \$6,000/ha.
- The average operating costs for the 'Low Cost Growers' was \$3,643 compared to \$3,562/ha in 2014.



What steps can you take in a “normal year” to keep your operating costs below \$3,700/ha?
 Are you monitoring the costs which are much higher than the average?
 Have you investigated group purchasing arrangements?
 Does your strategy in relation to fixed costs need to change to minimise losses in low water years?
 Should you be using more contractors so that in low water years you don't have the fixed costs?

2.1.2.4 COST OF PRODUCTION (\$ / BALE)

	AVERAGE	TOP 20%	DIFF
2015	\$347	\$284	\$63
2014	\$382	\$326	\$56
2013	\$356	\$281	\$75
2012	\$371	\$308	\$63
2011	\$346	\$282	\$64
* Five year average	\$360	\$296	\$64

- A low cost of production per bale (driven by higher yields) is the most significant feature of the Top 20%. This is achieved by producing more bales of cotton from a lower cost base. In the 2015 year this was achieved by the Top 20% as they grew a higher yield per hectare (14.31 bales/ha) and mostly grew cotton on a larger area of their farm. This enabled them to spread the fixed and semi fixed costs over a greater area.
- Long-term average figures for the top producers prove that it is possible to achieve a benchmark cost of production in the \$290 to \$350/bale range in a “normal” year.
- With the extra yield of 0.25 - 0.5 bales per hectare, costs change very little.



Are you continually focusing on your cost of production per bale?
 What are the Top 20% doing different to you?

2.1.2.5 COMPARISON OF VALLEYS

	Gwydir	Barwon/Mcintyre	Macquarie	Namoi	SouthernValleys
Gross income (\$/ha)	\$7,263	\$6,064	\$6,868	\$5,759	\$6,122
Operating costs (\$/ha)	\$4,305	\$3,922	\$5,444	\$6,033	\$4,201
Operating profit (\$/bale)	\$219	\$179	\$110	(\$25)	\$157
Hectares grown	1,382	491	291	538	1,789
Yield/ha	13.49	11.97	12.96	11.12	12.27

- This is the first year we have included specific numbers for the Southern Valleys.
- The sample size this year for other valleys was not large enough to be included separately in this years' analysis.

2.1.3 FIVE YEAR AVERAGES

As noted in the introduction, we believe (in normal years) the message of the five year average is important. The table below compares the five year average figures for the Average Group and the Top 20% Group.

What makes the Top 20% Group so much better than Average Group?

In the five selected years, the Top 20% Group made around 100% more profit (after interest) than the Average Group (\$2,190/ha compared to \$1077/ha).

Land productivity (yield/ha)	64%	or	\$713
Price	5%	or	\$51
Hail insurance claims	5%	or	\$60
Direct cost savings – excluding Wages – Proprietors	23%	or	\$256
Interest savings (less debt)	3%	or	\$35
	100%		\$1,114

The message from these figures is that better land productivity (measured by higher yields) is overwhelmingly the major feature of the Top performers. Farmers should concentrate on growing higher yield within a realistic cost framework rather than searching for dramatic cost cutting measures if they wish to improve their performance significantly.

2.1.4 OTHER OBSERVATIONS

Over the years, many 'rules of thumb' have been developed and quoted by farmers, financiers and accountants:

- Cotton farmers are in principle debt free if, at year-end, their equity in cotton pools and any cotton unsold covers their total borrowings.
- The contingent tax liability associated with crop proceeds tipped forward (on hand and in pools) should always be calculated and bought to account at year- end when measuring your wealth.
- Debt in the industry is becoming more of an issue. Even with interest rates at historically low levels, interest cost per hectare is significant. To overlay current debt with rates of 10 or 12% would have significant impact on the industry. It is difficult to continue with old 'rules of thumb' such as debt should not exceed 150% of average gross farm income (100% when interest rates are above 12%), when profitability is really the key.
- High wage costs and machinery horsepower are a quick indicator of overall high costs of operations.
- Don't underestimate the value of knowledge, within your industry and worldwide. It can be difficult to keep up to date on the latest practices, but falling behind can cost you money.
- Because of the high fixed and semi fixed costs in this industry, it is becoming increasingly important to be able to grow enough area every year to cover these costs.

2.1.5 FEATURES OF THE TOP PERFORMERS

Over the past fifteen years many cotton farmers have been able to achieve top-class results, even in years when seasonal or financial circumstances were less than favourable.

Outlined below are some of the distinguishing characteristics and features of successful cotton growers:

- **Controlled operating costs**

Operating costs (before interest) for farmers have averaged \$3,572/ha for the past five years. With fine-tuning, the best farmers have been able to keep their operating costs under control without sacrificing yield and still adequately maintaining all assets.

The performance of the 'Low Cost' farmers operating at their optimum scale over the past five years proves that a target for operating costs of \$3,000 to \$3,300/ha is achievable in a normal year. These figures translate to operating costs of \$300 to \$330/bale.

- **Consistent marketing strategies**

There are a large number of marketing alternatives available to cotton farmers. The strategies adopted by individual farmers depend on:

- Individual outlook on risk
- World-wide economic outlook
- Taxation implications
- Cash flow implications
- Water availability
- Level of knowledge on how to use the complex alternatives

To date, the perfect marketing strategy has proved to be elusive. Farmers need to make marketing decisions with the aim of maximising their crop income, keeping production risk in mind and remembering that a net return in excess of \$485/bale should produce a sizeable profit.

In our opinion, the application of consistent marketing strategies on a year in year out basis is the key to maximising per bale prices in the longer term.

The top farmers know their cost of production per bale. They then base marketing decisions on that cost.

- **Productive labour**

Top-class results cannot be produced without having a top-class team of employees who are efficient, focused, motivated and stable.

The best farms ensure that employees are kept informed, are trained to do their job properly, given responsibility and an opportunity to participate in on-farm decision making. It is also essential that employees are properly remunerated and take their holidays every year. The most efficient farms are operating with one permanent person for every 285 hectares.

- **Reliable machinery**

All good farmers appreciate the importance of timing and so ensure that they own or have access to sufficient reliable machinery to carry out all operations efficiently and on time. For farmers who decide to own tractors to carry out all field operations, capacity of 350 to 400 engine horsepower per 500 hectares is generally required.

The ideal picking capacity for farms is subject to a great deal of debate with many efficient operators concluding that the whole picking operation should be carried out by contractors. The best farmers aim to complete their picking operation within 30 days.

- **Sustainable farming techniques (rotation)**

Many of the benefits of a stringent rotation program are not quantifiable in the short term and the benefits that are quantifiable are often disguised by other variables that can affect yield in any season. Growers however, are rotating to address the issues of disease and to allow for the re-levelling of fields.

If farmers are going to maintain a sustainable cotton production system, maintain high yields, and achieve high levels of profitability in the long term, the issue of rotation needs to be included in the equation.

Obviously the amount of water plays a huge role in rotation; however the idea is to aim for a 2:1 rotation in the long term.

The top performers are continually looking at varied crops for rotation. These decisions are being made for agronomic and financial reasons. Industry awareness is required to learn from these operators.

- **Water use efficiency**

The timing of when water is applied is critical in the production of high yielding crops.

As water becomes even more limited, the science behind the timing of watering and understanding each variety's reaction to the timing of water will become even more crucial. Growers are now paying closer attention to measuring water use efficiency.

- **Conservative levels of debt**

Many farmers are carrying large amounts of debt, with debt levels of 40% to 50% being common. By adopting sound, sustainable practices, the best farmers have been able to generate a significant cash surplus to repay borrowings. The best farmers are in an enviable position of being able to survive in tough times, and in some circumstances expand the scale of their operations.

It must be noted that debt can only be repaid out of a cash surplus after allowing for taxation, drawings and capital purchases, or from the sale of other assets. During the last 15 years there has been significant capital gain for the holders of water licences. This has allowed debt levels to increase whilst maintaining the debt to equity margin. We do not believe that capital gain can continue at the same rate and the future reduction in the debt to equity margin will need to be out of profits, not capital gain.

Our current low interest rate environment should encourage growers to look at protecting their borrowings through interest rate management. Financiers are offering many varied products that provide this protection.

Farmers are considered to be in a very solid financial position (category A) if their debt, net of equity in cotton pools and unsold crop, is less than 20% of assets at 30 June.

- **Efficient financial management**

Good farmers keep their financial affairs up to date and under control by utilising computerised office tools.

Annual budgets are prepared by the Top performers on a conservative basis with realistic yet challenging targets. Performance is then monitored monthly, comparing actual results with the previously prepared budget. With up-to-date management reports, Top performers are able to analyse performance and fine tune operations on a regular basis. They also keep their financiers well informed at all times.

- **Timing**

The best farms carry out all operations 'on time'. Fields are ready to plant as soon as the season permits, machinery is always ready to carry out the next task and team members always know what they have to do a week or a month ahead. Waterings are never late.

Being 'on time' is a result of good planning and good communication and leads to increased yields.

- **Planning and long term vision**

At the heart of every good operation is a person with vision; vision of where the business is going on a day-to-day basis, on an annual basis, and on a long-term basis (ten years plus). The best farmers always seem to have time on their hands because they have clearly defined goals. They have communicated those goals to their team members, and then take on the role of a coach who guides and encourages their team to carry out the day-to-day activities.

- **High yields**

High yields are the reward for getting all aspects of a farming operation right. No single farming technique, method of operation or management decision is going to have a significant impact. Top performers do all the little things thoroughly and on time and as a consequence 'reap the rewards'.

The best farmers consistently achieve yields in excess of 11 bales/ha year after year (assuming adequate water availability and no disasters such as hail or floods). Total farm averages of greater than 14 bales/ha have been achieved and are now a realistic goal, especially using the excellent cotton varieties that are continually being developed.

2.2 RETURN ON ASSETS

2.2.1 WHAT RETURN ON ASSETS AM I GETTING?

With costs continuing to rise, low cotton prices (for this season), cotton farm sales sluggish and a lot of discussion regarding where capital growth in the industry will come from, growers must continue to look at the return on assets of a cotton farm.

Although a long term view is essential, growers must continually look at alternative investments (allowing for risk) to assess what the return of a cotton farm really is.

As a general statement, the 10 year average figures should not be used when analysing the return on assets of the industry as a whole without making an allowance for the drought years where the figures on non-irrigated areas have not been included in the report and taking into account the fallow fields.

Trend lines indicate that the operating profit for the Top 20% and the Average Group are both increasing slightly, but this is strongly influenced by the 2011 year where there were both high yields and prices achieved.

How do I calculate my simple return on assets (ROA)?

The simple ROA is calculated by dividing your operating profit per hectare (before interest) by the value per hectare (which is calculated as the total value of your land, licences and machinery divided by the number of hectares grown during the year).

We have included a worksheet to calculate your individual ROA. The process is easy to follow and is outlined below:-

- From the farm operating profit/(loss) per ha spreadsheet find your yield and price per bale. Match these up to calculate your operating profit (before interest) based on costs of \$3,500/ha.
- Find the profit closest to your farm along the base of the return on assets based on various profits and land variations spreadsheets.
- Select a value per hectare (this is calculated as the total value of your land, licences and machinery divided by the number of hectares grown during the year), then:
 - a) You should add a value per hectare to allow for country not planted. If you plant 2/3 of your country, increase the value of your investment by 50%.
 - b) You also should add a value per hectare based on your machinery investment relating to the cotton operation e.g. \$1,500,000 machinery divided by 1,500 hectares increases your investment by \$1,000/ha).
- Match the two up and calculate your simple return on assets.

2.2.2 WHY MEASURE ROA?

In isolation ROA provides you with a measure to better assess alternative investments. One year's ROA result should not serve as the yardstick to base decisions such as entry or exit of the industry.

This ROA does not include any increase in the value of your assets. If in a year you achieve 7% ROA and the value of your assets increased by 5% then your total return is 12%.

Linked directly to this is the fact that you now have a higher asset value, and next year if you achieve the same profit, your ROA will be lower.

Use the calculator to predict what your future returns may be.

For example:

- Assume a profit of \$800/ha against today's valuation of \$10,000/ha – 8% return
- Now use the same profit against an increased market rate of \$15,000/ha – 5.3% return
- To achieve an 8% return against a \$15,000/ha valuation you need to reach a profit of \$1,200/ha.

The cotton yield remains the greatest variable when looking forward or doing current comparisons between growers. As discussed in this and prior reports, land productivity (yield) contributes to the majority of the difference between the Top 20% and the average. What difference does yield make on ROA?

For example:

- Five year average profit to 2015 (before interest) for the Average Group of \$1,430/ha against \$17,500/ha – 8.0% return
- Five year average profit to 2015 (before interest) for the Top 20% Group of \$2,510/ha against \$17,500/ha – 14.00% return

(Yield differential of 1.43 bales/ha).

ROA needs to be balanced against such factors as risk, sustainability and reinvestment. If a grower's main aim is to just increase the ROA, this may have a negative impact on sustainability, as they may not reinvest through redevelopment and take other sustainable actions.

There is a direct link between ROA and yield. The industry continues to strive for increased yield with the challenge of balancing long term sustainability.

RETURN ON ASSETS CALCULATOR 2015

FARM OPERATING PROFIT/(LOSS) PER HECTARE BASED ON ALTERNATIVE YIELDS AND PRICES – BEFORE INTEREST

650	1,213	1,375	1,538	1,700	1,863	2,025	2,188	2,350	2,513	2,675	2,838	3,000	3,163	3,325	3,488	3,650	3,813	3,975	4,138	4,300	4,463	4,625
640	1,140	1,300	1,460	1,620	1,780	1,940	2,100	2,260	2,420	2,580	2,740	2,900	3,060	3,220	3,380	3,540	3,700	3,860	4,020	4,180	4,340	4,500
630	1,068	1,225	1,383	1,540	1,698	1,855	2,013	2,170	2,328	2,485	2,643	2,800	2,958	3,115	3,273	3,430	3,588	3,745	3,903	4,060	4,218	4,375
620	995	1,150	1,305	1,460	1,615	1,770	1,925	2,080	2,235	2,390	2,545	2,700	2,855	3,010	3,165	3,320	3,475	3,630	3,785	3,940	4,095	4,250
610	923	1,075	1,228	1,380	1,533	1,685	1,838	1,990	2,143	2,295	2,448	2,600	2,753	2,905	3,058	3,210	3,363	3,515	3,668	3,820	3,973	4,125
600	850	1,000	1,150	1,300	1,450	1,600	1,750	1,900	2,050	2,200	2,350	2,500	2,650	2,800	2,950	3,100	3,250	3,400	3,550	3,700	3,850	4,000
590	778	925	1,073	1,220	1,368	1,515	1,663	1,810	1,958	2,105	2,253	2,400	2,548	2,695	2,843	2,990	3,138	3,285	3,433	3,580	3,728	3,875
580	705	850	995	1,140	1,285	1,430	1,575	1,720	1,865	2,010	2,155	2,300	2,445	2,590	2,735	2,880	3,025	3,170	3,315	3,460	3,605	3,750
570	633	775	918	1,060	1,203	1,345	1,488	1,630	1,773	1,915	2,058	2,200	2,343	2,485	2,628	2,770	2,913	3,055	3,198	3,340	3,483	3,625
560	560	700	840	980	1,120	1,260	1,400	1,540	1,680	1,820	1,960	2,100	2,240	2,380	2,520	2,660	2,800	2,940	3,080	3,220	3,360	3,500
550	488	625	763	900	1,038	1,175	1,313	1,450	1,588	1,725	1,863	2,000	2,138	2,275	2,413	2,550	2,688	2,825	2,963	3,100	3,238	3,375
540	415	550	685	820	955	1,090	1,225	1,360	1,495	1,630	1,765	1,900	2,035	2,170	2,305	2,440	2,575	2,710	2,845	2,980	3,115	3,250
530	343	475	608	740	873	1,005	1,138	1,270	1,403	1,535	1,668	1,800	1,933	2,065	2,198	2,330	2,463	2,595	2,728	2,860	2,993	3,125
520	270	400	530	660	790	920	1,050	1,180	1,310	1,440	1,570	1,700	1,830	1,960	2,090	2,220	2,350	2,480	2,610	2,740	2,870	3,000
510	198	325	453	580	708	835	963	1,090	1,218	1,345	1,473	1,600	1,728	1,855	1,983	2,110	2,238	2,365	2,493	2,620	2,748	2,875
500	125	250	375	500	625	750	875	1,000	1,125	1,250	1,375	1,500	1,625	1,750	1,875	2,000	2,125	2,250	2,375	2,500	2,625	2,750
490	53	175	298	420	543	665	788	910	1,033	1,155	1,278	1,400	1,523	1,645	1,768	1,890	2,013	2,135	2,258	2,380	2,503	2,625
480	-20	100	220	340	460	580	700	820	940	1,060	1,180	1,300	1,420	1,540	1,660	1,780	1,900	2,020	2,140	2,260	2,380	2,500
470	-93	25	143	260	378	495	613	730	848	965	1,083	1,200	1,318	1,435	1,553	1,670	1,788	1,905	2,023	2,140	2,258	2,375
460	-165	-50	65	180	295	410	525	640	755	870	985	1,100	1,215	1,330	1,445	1,560	1,675	1,790	1,905	2,020	2,135	2,250
450	-238	-125	-13	100	213	325	438	550	663	775	888	1,000	1,113	1,225	1,338	1,450	1,563	1,675	1,788	1,900	2,013	2,125
440	-310	-200	-90	20	130	240	350	460	570	680	790	900	1,010	1,120	1,230	1,340	1,450	1,560	1,670	1,780	1,890	2,000
430	-383	-275	-168	-60	48	155	263	370	478	585	693	800	908	1,015	1,123	1,230	1,338	1,445	1,553	1,660	1,768	1,875
	7.25	7.50	7.75	8.00	8.25	8.50	8.75	9.00	9.25	9.50	9.75	10.00	10.25	10.50	10.75	11.00	11.25	11.50	11.75	12.00	12.25	12.50

\$ / BALE

AVERAGE YIELD PER HECTARE

(COST PER HA USED : \$3,500)

Steps

1. Pick your price per bale and yield/ha.
2. Match them up and get your profit per hectare based on growing costs of \$3,500.
3. Find your closest profit range on the bottom of the next graph.

RETURN ON ASSETS CALCULATOR 2015

RETURN ON ASSETS BASED ON VARIOUS PROFITS AND LAND VALUATIONS

	100	300	500	600	700	800	900	1,000	1,100	1,200	1,300	1,400	1,500	1,700	1,900	2,000	2,200	2,400	2,600	2,800	3,000	3,200
\$55,000	0.3%	0.9%	1.4%	1.7%	2.0%	2.3%	2.6%	2.9%	3.1%	3.4%	3.7%	4.0%	4.3%	4.9%	5.4%	5.7%	6.3%	6.9%	7.4%	8.0%	8.6%	9.1%
\$54,000	0.3%	0.9%	1.5%	1.8%	2.1%	2.4%	2.6%	2.9%	3.2%	3.5%	3.8%	4.1%	4.4%	5.0%	5.6%	5.9%	6.5%	7.1%	7.6%	8.2%	8.8%	9.4%
\$53,000	0.3%	0.9%	1.5%	1.8%	2.1%	2.4%	2.7%	3.0%	3.3%	3.6%	3.9%	4.2%	4.5%	5.2%	5.8%	6.1%	6.7%	7.3%	7.9%	8.5%	9.1%	9.7%
\$52,000	0.3%	0.9%	1.6%	1.9%	2.2%	2.5%	2.8%	3.1%	3.4%	3.8%	4.1%	4.4%	4.7%	5.3%	5.9%	6.3%	6.9%	7.5%	8.1%	8.8%	9.4%	10.0%
\$51,000	0.3%	1.0%	1.6%	1.9%	2.3%	2.6%	2.9%	3.2%	3.5%	3.9%	4.2%	4.5%	4.8%	5.5%	6.1%	6.5%	7.1%	7.7%	8.4%	9.0%	9.7%	10.3%
\$50,000	0.3%	1.0%	1.7%	2.0%	2.3%	2.7%	3.0%	3.3%	3.7%	4.0%	4.3%	4.7%	5.0%	5.7%	6.3%	6.7%	7.3%	8.0%	8.7%	9.3%	10.0%	10.7%
\$49,000	0.3%	1.0%	1.7%	2.1%	2.4%	2.8%	3.1%	3.4%	3.8%	4.1%	4.5%	4.8%	5.2%	5.9%	6.6%	6.9%	7.6%	8.3%	9.0%	9.7%	10.3%	11.0%
\$48,000	0.4%	1.1%	1.8%	2.1%	2.5%	2.9%	3.2%	3.6%	3.9%	4.3%	4.6%	5.0%	5.4%	6.1%	6.8%	7.1%	7.9%	8.6%	9.3%	10.0%	10.7%	11.4%
\$47,000	0.4%	1.1%	1.9%	2.2%	2.6%	3.0%	3.3%	3.7%	4.1%	4.4%	4.8%	5.2%	5.6%	6.3%	7.0%	7.4%	8.1%	8.9%	9.6%	10.4%	11.1%	11.9%
\$46,000	0.4%	1.2%	1.9%	2.3%	2.7%	3.1%	3.5%	3.8%	4.2%	4.6%	5.0%	5.4%	5.8%	6.5%	7.3%	7.7%	8.5%	9.2%	10.0%	10.8%	11.5%	12.3%
\$45,000	0.4%	1.2%	2.0%	2.4%	2.8%	3.2%	3.6%	4.0%	4.4%	4.8%	5.2%	5.6%	6.0%	6.8%	7.6%	8.0%	8.8%	9.6%	10.4%	11.2%	12.0%	12.8%
\$44,000	0.4%	1.3%	2.1%	2.5%	2.9%	3.3%	3.8%	4.2%	4.6%	5.0%	5.4%	5.8%	6.3%	7.1%	7.9%	8.3%	9.2%	10.0%	10.8%	11.7%	12.5%	13.3%
\$43,000	0.4%	1.3%	2.2%	2.6%	3.0%	3.5%	3.9%	4.3%	4.8%	5.2%	5.7%	6.1%	6.5%	7.4%	8.3%	8.7%	9.6%	10.4%	11.3%	12.2%	13.0%	13.9%
\$42,000	0.5%	1.4%	2.3%	2.7%	3.2%	3.6%	4.1%	4.5%	5.0%	5.5%	5.9%	6.4%	6.8%	7.7%	8.6%	9.1%	10.0%	10.9%	11.8%	12.7%	13.6%	14.5%
\$41,000	0.5%	1.4%	2.4%	2.9%	3.3%	3.8%	4.3%	4.8%	5.2%	5.7%	6.2%	6.7%	7.1%	8.1%	9.0%	9.5%	10.5%	11.4%	12.4%	13.3%	14.3%	15.2%
\$40,000	0.5%	1.5%	2.5%	3.0%	3.5%	4.0%	4.5%	5.0%	5.5%	6.0%	6.5%	7.0%	7.5%	8.5%	9.5%	10.0%	11.0%	12.0%	13.0%	14.0%	15.0%	16.0%
\$39,000	0.5%	1.6%	2.6%	3.2%	3.7%	4.2%	4.7%	5.3%	5.8%	6.3%	6.8%	7.4%	7.9%	8.9%	10.0%	10.5%	11.6%	12.6%	13.7%	14.7%	15.8%	16.8%
\$38,000	0.6%	1.7%	2.8%	3.3%	3.9%	4.4%	5.0%	5.6%	6.1%	6.7%	7.2%	7.8%	8.3%	9.4%	10.6%	11.1%	12.2%	13.3%	14.4%	15.6%	16.7%	17.8%
\$37,000	0.6%	1.8%	2.9%	3.5%	4.1%	4.7%	5.3%	5.9%	6.5%	7.1%	7.6%	8.2%	8.8%	10.0%	11.2%	11.8%	12.9%	14.1%	15.3%	16.5%	17.6%	18.8%
\$36,000	0.6%	1.9%	3.1%	3.8%	4.4%	5.0%	5.6%	6.3%	6.9%	7.5%	8.1%	8.8%	9.4%	10.6%	11.9%	12.5%	13.8%	15.0%	16.3%	17.5%	18.8%	20.0%
\$35,000	0.7%	2.0%	3.3%	4.0%	4.7%	5.3%	6.0%	6.7%	7.3%	8.0%	8.7%	9.3%	10.0%	11.3%	12.7%	13.3%	14.7%	16.0%	17.3%	18.7%	20.0%	21.3%

PROFIT PER HECTARE FROM PREVIOUS WORKSHEET

VALUE /HA

Steps

1. Select a value of your land, licences and machinery that are applicable to the cotton operation.
2. Divide the value in 1. by the number of hectares grown in the year.
3. Use your closest profit and the value per hectare to work out the return on your investment.

2.3 CONCLUSION

The 2015 was very favourable in terms of weather.

Yields per hectare increased markedly from previous year and were well above the five year averages.

Average farm yields of 14.5 bales with costs of up to \$3,500 per hectare are now an achievable goal.

Net profit per hectare was the best on record for this analysis.

In the 2012 report, we predicted that that 2013 and 2014 would be tough financially for the industry. This prediction played out, with poor per hectare returns on areas grown and many operators having overall farm losses. While favourable conditions in 2015 returned a bumper profit on the hectares that were able to be grown, in many circumstances this still resulted in an overall farm loss.

In coming years it will be interesting to see the numbers play out between the perceived reliability of water in the Southern Valleys and the more established areas. Although it is a difficult concept to analyse, we believe there is a real value difference between more reliable yearly profits and a less reliable figure, even where the average is the same.

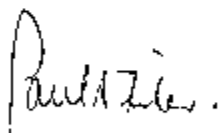
While water licenses continue to either increase or hold their value, the value of irrigation land in the more established valleys continues to lag behind increases in dryland farming country. This reinforces the fact that farmers are in two businesses – the business of growing crops and the business of owning land, improvements and water. With investment and leasing options associated with land and water becoming more common-place, perhaps growers should be reviewing the two separate activities of farming and real estate ownership separately. In short, you do not need to own land or water to be an irrigator. It is critical that the land and water assets are viewed and analysed separately. For example, the value of irrigation land should be reviewed with respect to the value of dryland farming country plus irrigation improvements while each type of water (general security, supplementary and overland flow) should be analysed instead of water as a whole.

The agricultural sector in general and the cotton industry in particular are known for their early adoption of technology. In the hunt for yield, the question will increasingly be who owns the technology that will facilitate this yield increase and how much will it cost to access.

It is critical that farmers understand what it takes to maximise profit and to be in the Top 20% Group. When they understand this, practically implementing change in a formal way is critical.

The 2015 Australian Cotton Comparative Analysis maintains our goal to measure and analyse the components that provide farmers with a stronger financial bottom line.

The cotton industry continues to reinvest in BMP, sustainability programs and in the communities in which it operates.



Paul Fisher
Director | Boyce Chartered Accountants
Moree NSW
pfisher@boyceca.com

3

Comparative Statistics



3.1 PARTICIPANTS

3.1.1 COMPARISON OF AVERAGE INCOME AND EXPENSE ITEMS FOR THE 2015 YEAR FOR LANDHOLDING FARMERS (PER HECTARE BASIS)

	YOUR FARM (TOTAL)	YOUR FARM	ALL FARMES	TOP 20%	BOTTOM 20%	LOW COST	GROWERS (> 2,000 HA)
INCOME							
Cotton proceeds - Lint			6,133	7,071	4,988	5,699	6,187
Cotton proceeds - Seed			1,180	1,467	784	1,156	1,138
Ginning			(744)	(789)	(606)	(710)	(725)
Levies			(54)	(54)	(41)	(56)	(53)
Cotton proceeds - Hail claims			10	0	50	7	4
			6,525	7,695	5,175	6,096	6,551
EXPENSES							
Cartage			106	74	84	109	114
Chemical application			146	148	125	140	164
Chemicals - Defoliants			61	58	55	58	66
Chemicals - Herbicides			116	140	118	101	114
Chemicals - Insecticides			112	174	80	109	116
Chemicals - Others			6	10	4	5	5
Chipping			1	1	0	1	1
Consultants			45	70	47	16	44
Contract picking			151	144	205	169	205
Contract farming and ripping			102	152	291	33	144
Cotton picking wrap and sundries			104	98	67	90	108
Depreciation			354	411	586	269	291
Electricity			104	31	140	37	77
Fertiliser			478	485	495	444	461
Fuel and oil			377	349	613	284	361
Hire of plant			39	1	27	21	48
Insurance			116	159	77	87	109
Licence fee - Bollgard			270	192	257	277	260
Licence fee - Roundup ready			69	63	70	66	70
Motor vehicle expenses			23	14	26	18	15
R & M - Farming plant			159	146	123	84	96
R & M - Pumps and earthworks			217	334	302	124	177
Seed			140	154	123	133	138
Water charges			343	184	512	303	324
Wages - Employees			514	338	679	525	472
Wages - Proprietors			25	12	41	8	0
Administration			93	33	201	55	63
Other farm overheads			92	87	93	77	77
			4,363	4,062	5,441	3,643	4,120
OPERATING PROFIT/(LOSS)			2,162	3,633	(266)	2,453	2,431
ADD:							
Wages - Proprietors			25	12	41	8	0
FARM OPERATING PROFIT/(LOSS)			2,187	3,645	(225)	2,461	2,431

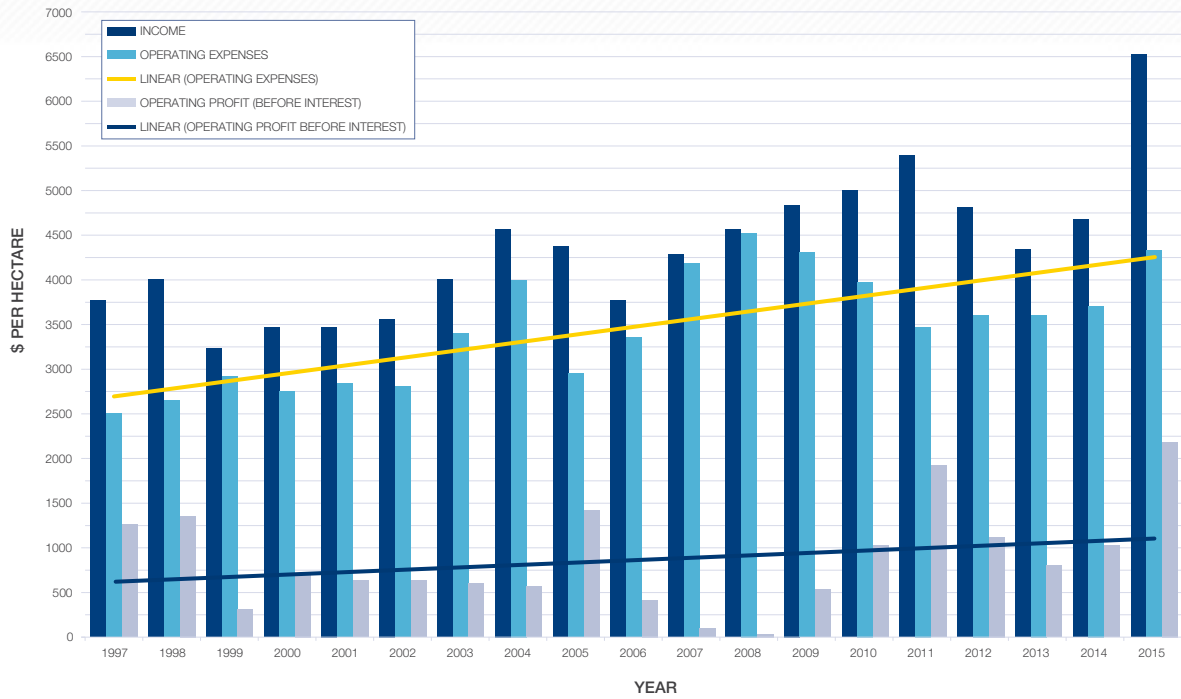
3.1.1 COMPARISON OF AVERAGE INCOME AND EXPENSE ITEMS FOR THE 2015 YEAR FOR LANDHOLDING FARMERS (continued)

	YOUR FARM (TOTAL)	YOUR FARM	ALL FARMS	TOP 20%	BOTTOM 20%	LOW COST	LARGE GROWERS (>2,000 HA)
DEDUCT:							
Interest and bank charges			288	257	217	194	55
Interest - Crop terms			0	0	0	0	0
			288	257	217	194	55
FARM NET PROFIT/(LOSS)			\$1,899	\$3,388	(\$442)	\$2,267	\$2,376
CROP RESULTS							
Hectares of cotton grown			926.11	997.79	678.83	1,242.29	2,677.24
Total yield			11,660.33	14,283.13	6,889.59	14,707.30	33,723.65
Yield per hectare			12.59	14.31	10.15	11.84	12.60
Value per bale			\$517.48	\$537.62	\$505.04	\$514.36	\$519.73
Cost of production per bale			\$346.53	\$283.59	\$536.05	\$307.83	\$327.12
Operating profit/(loss) per bale			\$171.72	\$254.03	(\$26.09)	\$207.08	\$192.89
Number of bales per hectare required to cover operating expenses			8.43	7.55	10.77	7.09	7.93
Number of bales per hectare required to cover total expenses			8.99	8.03	11.20	7.46	8.03
LABOUR							
Number of Hectares per permanent person (excluding proprietors)			224.22	332.60	214.37	161.94	349.21
AVAILABLE TRACTOR HORSE POWER							
Tractor horse power per 500 hectares			398.99	469.70	557.33	432.90	217.57
AVAILABLE PICKING CAPACITY							
Picker heads per 500 hectares			4.21	3.67	2.70	2.76	2.43
ROTATION							
Percentage of the current years' crop being grown on fallow fields or new fields (developed within the last three years)			45.38%	77.77%	6.87%	52.80%	52.59%
WATER USAGE							
Megalitres per hectare			6.73	6.38	2.97	8.22	4.76
Megalitres per bale			0.53	0.45	0.29	0.69	0.38

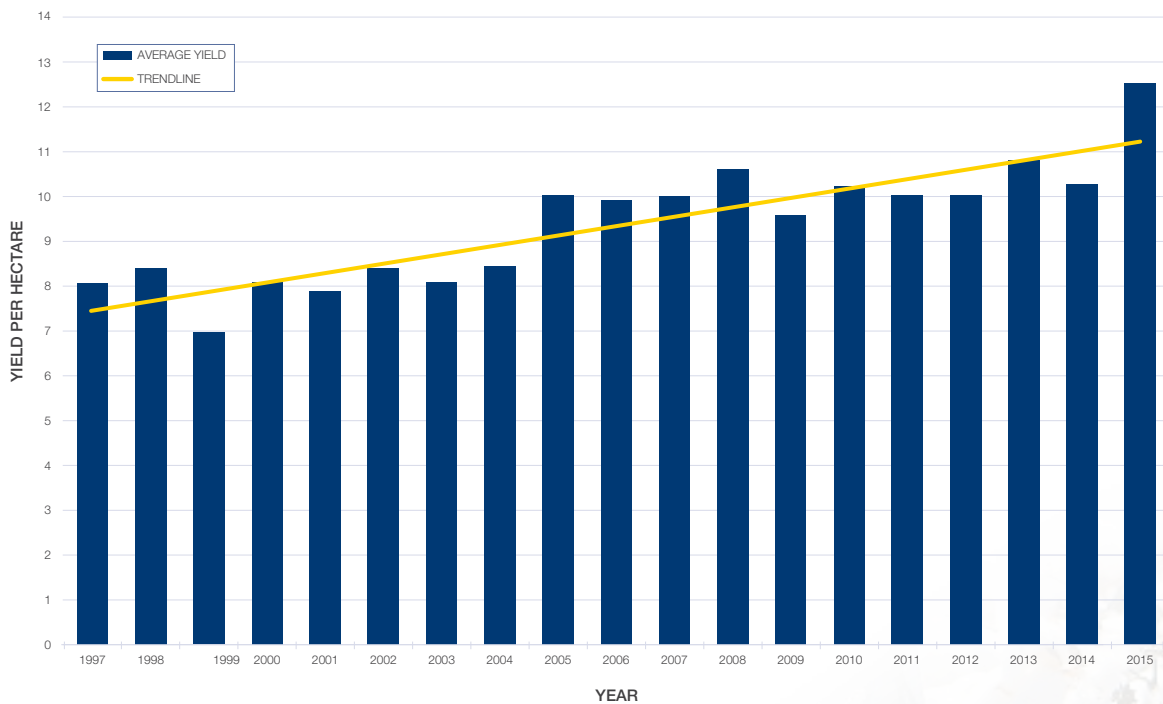
3.2 AVERAGE

3.2.1 GRAPHS

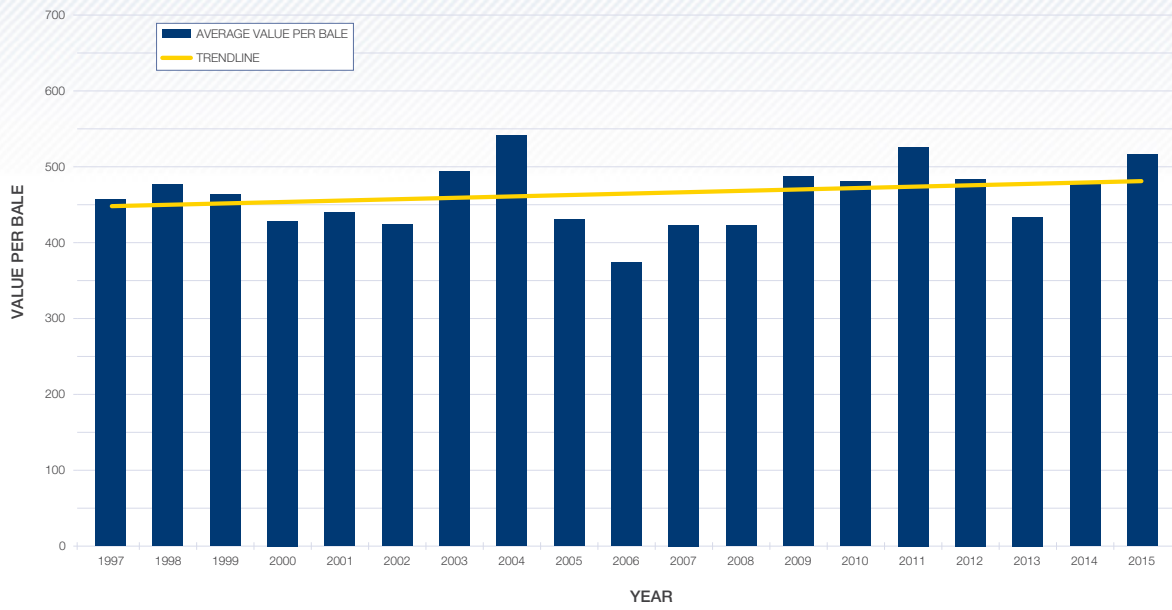
3.2.1.1 COMPARISON OF AVERAGE INCOME AND EXPENSE ITEMS FOR LANDHOLDERS



3.2.1.2 YIELD AND TRENDLINE FOR THE AVERAGE LANDHOLDERS



3.2.1.3 VALUE PER BALE AND TRENDLINE FOR THE AVERAGE LANDHOLDERS



3.2.2 COMPARISON OF AVERAGE INCOME AND EXPENSE ITEMS FOR THE PAST 10 YEARS FOR LANDHOLDING FARMERS (PER HA)

2006	2007	2008	2009	2010	2011	2012	2013	2014		2015
INCOME										
3,788	3,963	4,027	4,265	4,758	5,256	4,866	4,712	4,709	Cotton proceeds - Lint	6,133
436	859	1,016	935	742	546	400	524	805	Cotton proceeds - Seed	1,180
(479)	(551)	(521)	(495)	(542)	(484)	(512)	(630)	(621)	Ginning	(744)
(33)	(38)	(33)	(37)	(35)	(33)	(31)	(36)	(46)	Levies	(54)
55	49	73	169	79	106	70	17	57	Cotton proceeds - Hail claims	10
3,767	4,282	4,562	4,837	5,002	5,391	4,793	4,587	4,904		6,525
EXPENSES										
105	128	101	100	112	136	117	132	86	Cartage	106
158	115	110	87	136	138	131	106	151	Chemical application	146
57	54	71	79	63	55	53	42	49	Chemicals - Defoliants	61
109	159	183	174	108	108	85	84	115	Chemicals - Herbicides	116
292	132	116	144	151	142	84	35	81	Chemicals - Insecticides	112
3	3	4	48	38	11	7	5	4	Chemicals - Others	6
66	91	39	24	15	2	3	3	2	Chipping	1
59	75	63	76	72	64	57	52	43	Consultants	45
180	257	250	255	261	282	241	176	182	Contract picking	151
89	77	85	42	24	122	164	215	100	Contract farming and ripping	102
11	10	6	14	9	55	84	78	75	Cotton picking wrap and sundries	104
199	338	508	372	426	164	178	227	249	Depreciation	354
21	40	46	59	79	76	29	45	50	Electricity	104
356	312	394	428	399	387	517	546	533	Fertiliser	478
323	418	429	327	305	258	271	403	380	Fuel and oil	377
3	9	12	2	7	22	43	32	52	Hire of plant	39
144	227	216	217	179	161	123	110	104	Insurance	116
150	173	232	218	252	286	292	310	305	Licence fee - Bollgard	270
25	26	50	50	62	60	56	39	69	Licence fee - Roundup ready	69
22	30	31	34	35	21	19	19	19	Motor vehicle expenses	23
135	133	139	137	154	121	109	123	113	R & M - Farming plant	159
101	128	133	116	183	61	84	130	159	R & M - Pumps and earthworks	217
77	112	98	105	126	115	146	107	79	Seed	140
188	399	439	486	189	134	141	160	306	Water charges	343
327	473	445	391	384	357	344	380	391	Wages - Employees	514
38	96	105	106	69	20	21	31	17	Wages - Proprietors	25
41	68	58	58	35	49	47	52	56	Administration	93
73	103	162	154	103	65	155	166	148	Other farm overheads	92
3,352	4,186	4,525	4,303	3,976	3,472	3,601	3,808	3,918		4,363
415	96	37	534	1,026	1,919	1,192	779	986	OPERATING PROFIT/(LOSS)	2,162
38	96	105	106	69	20	21	31	17	Wages - Proprietors	25
453	192	142	640	1,095	1,939	1,213	810	1,003	FARM OPERATING PROFIT/(LOSS)	2,187

3.2.2 COMPARISON OF AVERAGE INCOME AND EXPENSE ITEMS FOR THE PAST 10 YEARS FOR LANDHOLDING FARMERS (PER HA) (continued)

2006	2007	2008	2009	2010	2011	2012	2013	2014		2015
DEDUCT:										
544	1,168	1,704	1,137	1,009	380	409	389	292	Interest and bank charges	288
4	0	0	0	0	0	0	11	0	Interest - Crop terms	0
548	1,168	1,704	1,137	1,009	380	409	400	292		288
(\$95)	(\$976)	(\$1,562)	(\$497)	\$86	\$1,559	\$804	\$410	\$711	FARM NET PROFIT/(LOSS)	\$1,899
CROP RESULTS										
936.02	531.13	449.09	486.65	621.17	1,426.48	1,675.67	1,517.64	1,593.12	Hectares of cotton grown	926.11
9,285.42	5,311.07	4,769.71	4,660.90	6,363.40	14,325.75	16,272.11	16,223.03	16,320.98	Total yield (bales)	11,660.33
9.92	10.00	10.62	9.58	10.24	10.04	9.71	10.69	10.24	Yield per hectare (bales)	12.59
\$374.23	\$423.35	\$422.66	\$487.41	\$480.56	\$526.23	\$486.42	\$427.44	\$473.05	Value per bale	\$517.48
\$337.82	\$418.66	\$425.99	\$449.40	\$388.37	\$345.82	\$370.77	\$356.27	\$382.31	Cost of production per bale	\$346.53
\$41.94	\$9.61	\$3.50	\$55.70	\$99.94	\$190.92	\$122.89	\$72.75	\$96.31	Operating profit per bale	\$171.72
8.95	9.89	10.70	8.83	8.28	6.60	7.40	8.91	8.28	Number of bales per hectare required to cover operating expenses	8.43
10.42	12.65	14.74	11.16	10.38	7.32	8.24	9.85	8.90	Number of bales per hectare required to cover total expenses	8.99
LABOUR										
185.44	139.77	107.24	171.76	167.24	184.91	322.79	221.25	226.43	Number of hectares per permanent person (excluding proprietors)	224.22
AVAILABLE TRACTOR HORSE POWER										
409.98	446.78	453.75	566.80	632.44	313.55	219.08	370.72	314.73	Tractor horse power per 500 hectares	398.99
AVAILABLE PICKING CAPACITY										
2.44	2.26	1.67	2.05	1.84	2.38	1.05	1.28	2.33	Picker heads per 500 hectares	4.21
ROTATION										
69.44%	49.67%	48.99%	51.68%	33.69%	69.98%	35.46%	35.71%	59.89%	Percentage of the current years' crop being grown on fallow fields or new fields (developed within the last three years)	45.38%
WATER USAGE										
9.62	9.00	9.00	9.00	9.00	8.78	8.80	9.39	9.87	Megalitres per hectare	6.73
0.97	0.90	0.85	0.94	0.88	0.87	0.91	0.88	0.96	Megalitres per bale	0.53
1,533	1,742	1,829	1,989	1,667	1,608	1,680	1,619	1,736	Direct costs	1,851
1,819	2,444	2,696	2,314	2,309	1,864	1,921	2,189	2,182	Other costs	2,512
3,352	4,186	4,525	4,303	3,976	3,472	3,601	3,808	3,918		4,363
442	305	348	362	403	428	376	345	386	Insecticide and Licence Fee Bollgard	382
600	420	458	449	539	566	507	451	537	Insecticide and Licence Fee Bollgard and application	528
344	458	457	386	384	334	300	448	430	Energy costs	481

3.2.3 COMPARISON OF AVERAGE RESULTS BETWEEN THE 2015 AND 2014 YEAR (PER HA)

	ALL FARMS 2015	ALL FARMS 2014	DIFFERENCE
INCOME			
Cotton proceeds - Lint	6,133	4,709	1,424
Cotton proceeds - Seed	1,180	805	375
Ginning	(744)	(621)	(123)
Levies	(54)	(46)	(8)
Cotton proceeds - Hail claims	10	57	(47)
	6,525	4,904	1,621
EXPENSES			
Cartage	106	86	(20)
Chemical application	146	151	5
Chemicals - Defoliants	61	49	(12)
Chemicals - Herbicides	116	115	(1)
Chemicals - Insecticides	112	81	(31)
Chemicals - Others	6	4	(2)
Chipping	1	2	1
Consultants	45	43	(2)
Contract picking	151	182	31
Contract farming and ripping	102	100	(2)
Cotton picking wrap and sundries	104	75	(29)
Depreciation	354	249	(105)
Electricity	104	50	(54)
Fertiliser	478	533	55
Fuel and oil	377	380	3
Hire of plant	39	52	13
Insurance	116	104	(12)
Licence fee - Bollgard	270	305	35
Licence fee - Roundup Ready	69	69	0
Motor vehicle expenses	23	19	(4)
R & M - Farming plant	159	113	(46)
R & M - Pumps and earthworks	217	159	(58)
Seed	140	79	(61)
Water charges and purchases	343	306	(37)
Wages - Employees	514	391	(123)
Wages - Proprietors	25	17	(8)
Administration	93	56	(37)
Other farm overheads	92	148	56
	4,363	3,918	(445)
OPERATING PROFIT/(LOSS)	2,162	986	1,176
ADD:			
Wages - Proprietors	25	17	(8)
FARM OPERATING PROFIT/(LOSS)	2,187	1,003	(1,184)

3.2.3 COMPARISON OF AVERAGE RESULTS BETWEEN THE 2015 AND 2014 YEAR (PER HA)

(continued)

	ALL FARMS 2015	ALL FARMS 2014	DIFFERENCE
DEDUCT:			
Interest and bank charges	288	292	4
Interest - Crop terms	0	0	0
	288	292	4
FARM NET PROFIT/(LOSS)	\$1,899	\$711	\$1,188
CROP RESULTS			
Hectares of cotton grown	926.11	1,593.12	(667.01)
Total yield (bales)	11,660.33	16,320.98	(4,660.65)
Yield per hectare (bales)	12.59	10.24	2.35
Value per bale	\$517.48	473.05	\$44.43
Cost of production per bale	\$346.53	382.31	\$35.78
Operating profit per bale	\$171.72	96.31	\$75.41
Number of bales per hectare required to cover operating expenses	8.43	8.28	(0.15)
Number of bales per hectare required to cover total expenses	8.99	8.90	(0.09)
LABOUR			
Number of hectares per permanent person (excluding proprietors)	224.22	226.43	(2.21)
AVAILABLE TRACTOR HORSE POWER			
Tractor horse power per 500 hectares	398.99	314.73	(84.26)
AVAILABLE PICKING CAPACITY			
Picker heads per 500 hectares	4.21	2.33	(1.88)
ROTATION			
Percentage of the current years' crop being grown on fallow fields or new fields (developed within the last three years)	45.38%	59.89%	(14.51%)
WATER USAGE			
Megalitres per hectare	6.73	9.87	3.14
Megalitres per bale	0.53	0.96	0.43

3.2.4 COMPARISON OF AVERAGE OF THE DIFFERENT VALLEY'S INCOME AND EXPENSE ITEMS FOR THE 2015 YEAR FOR LANDHOLDING FARMERS (PER HA)

	ALL VALLEYS AVE FIGURES	GWYDIR AVE FIGURES	McINTYRE/ BARWON AVE FIGURES	MACQUARIE AVE FIGURES	NAMOI AVE FIGURES	SOUTHERN VALLEYS AVE FIGURES
INCOME						
Cotton proceeds - Lint	6,133	6,687	5,740	6,507	5,290	5,934
Cotton proceeds - Seed	1,180	1,383	1,084	1,199	1,225	999
Ginning	(744)	(760)	(711)	(782)	(799)	(762)
Levies	(54)	(53)	(49)	(56)	(52)	(49)
Cotton proceeds - Hail claims	10	6	0	0	95	0
	6,525	7,263	6,064	6,868	5,759	6,122
EXPENSES						
Cartage	106	61	51	174	52	119
Chemical application	146	161	77	123	135	162
Chemicals - Defoliant	61	62	47	58	52	70
Chemicals - Herbicides	116	144	115	124	164	98
Chemicals - Insecticides	112	167	81	59	100	79
Chemicals - Other	6	5	3	2	2	11
Chipping	1	2	0	0	0	0
Consultants	45	53	50	87	24	51
Contract picking	151	57	174	97	42	230
Contract farming and ripping	102	87	18	34	19	197
Cotton picking wrap and sundries	104	112	81	124	111	102
Depreciation	354	463	248	427	858	196
Electricity	104	75	25	57	297	162
Fertiliser	478	530	366	604	608	460
Fuel and oil	377	368	344	375	532	409
Hire of plant	39	34	10	13	37	83
Insurance	116	159	81	123	84	82
Licence fee - Bollgard	270	235	284	304	306	283
Licence fee - Roundup ready	69	67	55	70	70	70
Motor vehicle expenses	23	15	41	33	48	21
R & M - Farming plant	159	164	226	175	193	131
R & M - Pumps and earthworks	217	276	268	491	475	83
Seed	140	138	137	120	155	135
Water charges and purchases	343	286	174	822	337	352
Wages - Employees	514	448	522	471	998	403
Wages - Proprietors	25	16	81	203	19	4
Administration	93	51	241	107	183	119
Other farm overheads	92	69	122	167	132	89
	4,363	4,305	3,922	5,444	6,033	4,201
OPERATING PROFIT/(LOSS)	2,162	2,958	2,142	1,424	(274)	1,921
ADD:						
Wages - Proprietors	25	16	81	203	8	4
FARM OPERATING PROFIT/(LOSS)	2,187	2,974	2,223	1,627	(266)	1,925

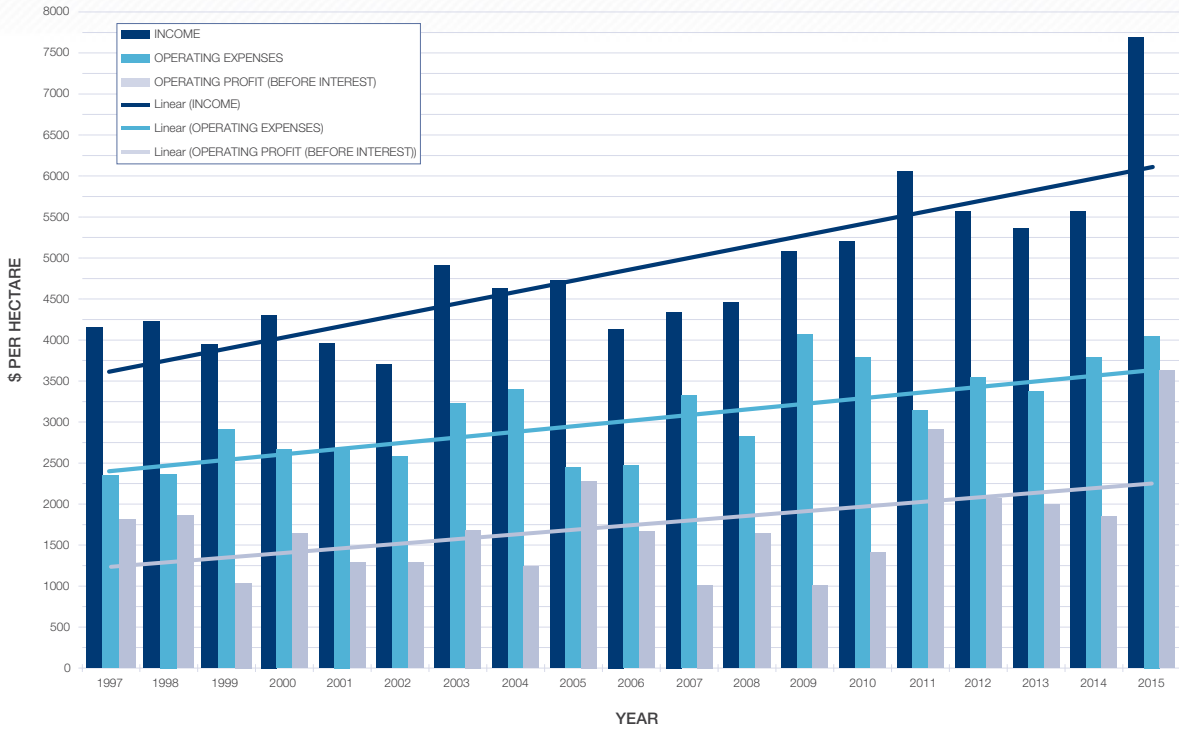
3.2.4 COMPARISON OF AVERAGE OF THE DIFFERENT VALLEY'S INCOME AND EXPENSE ITEMS FOR THE 2015 YEAR FOR LANDHOLDING FARMERS (PER HA) (continued)

	ALL VALLEYS AVE FIGURES	GWYDIR AVE FIGURES	McINTYRE/ BARWON AVE FIGURES	MACQUARIE AVE FIGURES	NAMOI AVE FIGURES	SOUTHERN VALLEYS AVE FIGURES
DEDUCT:						
Interest and bank charges	288	492	735	38	62	67
Interest - Crop terms	0	0	0	0	0	0
	288	492	735	38	62	67
FARM NET PROFIT/(LOSS)	\$1,899	\$2,482	\$1,488	\$1,589	(\$328)	\$1,858
CROP RESULTS						
Hectares of cotton grown	926	1,382	491	291	538	1,789
Total yield	11,660	18,647	5,874	3,769	5,984	21,960
Yield per hectare	13	13	12	13	11	12
Value per bale	517	538	507	530	518	500
Cost of production per bale	347	319	328	420	542	342
Operating profit/(loss) per bale	172	219	179	110	(25)	157
Number of bales per hectare required to cover operating expenses	8	8	8	10	12	8
Number of bales per hectare required to cover total expenses	9	9	9	10	12	9
LABOUR						
Number of Hectares per permanent person (excluding proprietors)	224	210	123	#DIV/0!	59	#DIV/0!
AVAILABLE TRACTOR HORSE POWER						
Tractor horse power per 500 hectares	399	371	709	254	1,638	0
AVAILABLE PICKING CAPACITY						
Picker heads per 500 hectares	4	2	5	0	9	0
ROTATION						
Percentage of the current years' crop being grown on fallow fields or new fields (developed within the last three years)	0	1	1	0	0	0
WATER USAGE						
Megalitres per hectare	7	7	17	1	22	0
Megalitres per bale	1	0	1	0	2	0

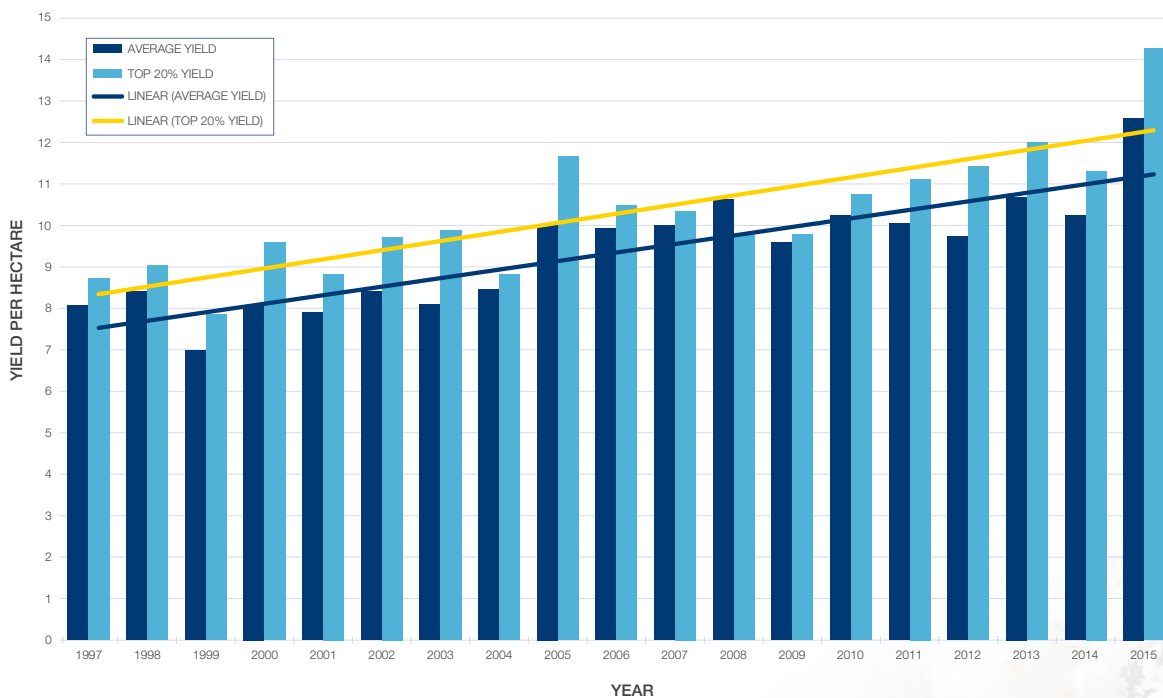
3.3 TOP 20% FARMERS

3.3.1 GRAPHS

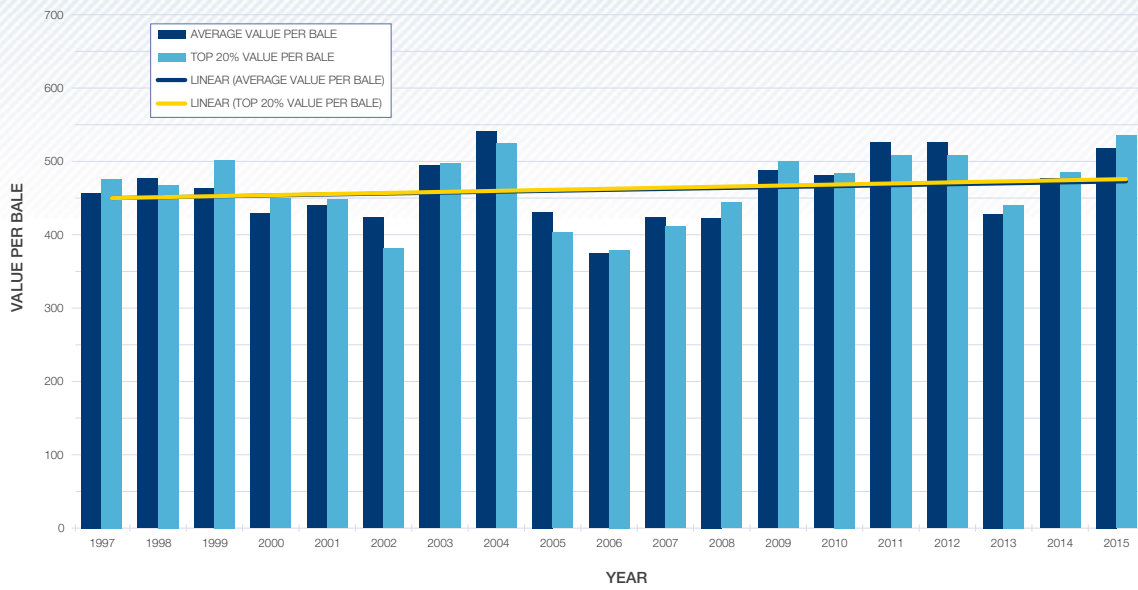
3.3.1.1 COMPARISON OF TOP 20% INCOME & EXPENSE ITEMS FOR LANDHOLDERS



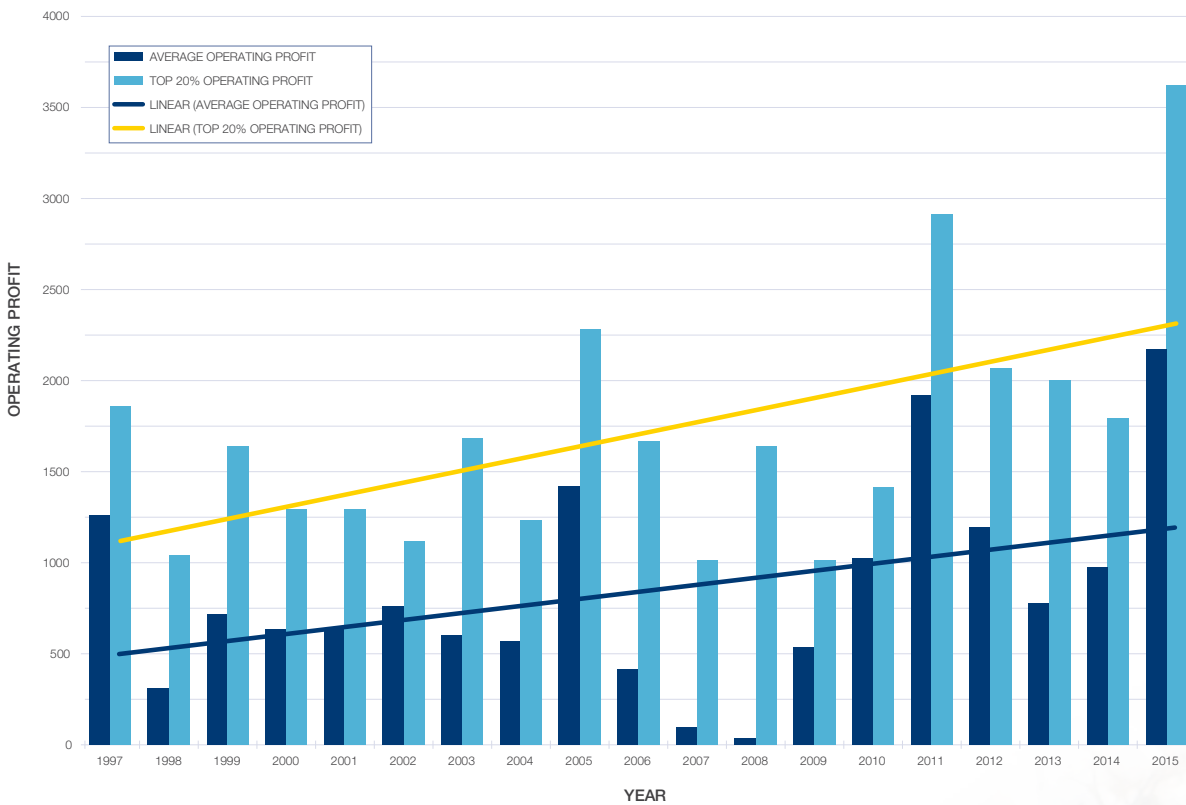
3.3.1.2 COMPARISON OF THE YIELD FOR THE AVERAGE AND THE TOP 20% FOR LANDHOLDERS



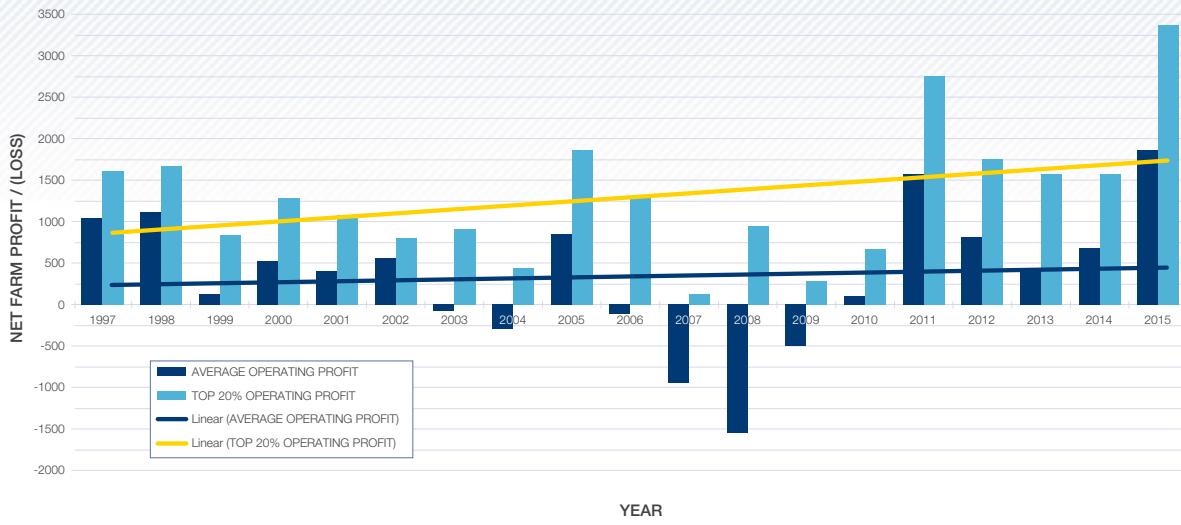
3.3.1.3 COMPARISON OF THE VALUE PER BALE FOR THE AVERAGE AND THE TOP 20% FOR LANDHOLDERS



3.3.1.4 COMPARISON OF THE OPERATING PROFIT FOR THE AVERAGE AND THE TOP 20% FOR LANDHOLDERS



3.3.1.5 COMPARISON OF THE NET FARM PROFIT/(LOSS) FOR THE AVERAGE AND THE TOP 20% FOR LANDHOLDERS



3.3.2 TOP 20% FARMERS - THE PAST TEN YEARS (PER HA)

2006	2007	2008	2009	2010	2011	2012	2013	2014		2015
INCOME										
4,065	3,950	3,997	4,368	5,067	5,659	5,509	5,502	5,270	Cotton proceeds - Lint	7,071
434	848	871	1,081	753	584	484	629	1,046	Cotton proceeds - Seed	1,467
(491)	(508)	(499)	(518)	(581)	(560)	(478)	(740)	(677)	Ginning	(789)
(36)	(38)	(34)	(40)	(37)	(36)	(40)	(49)	(41)	Levies	(54)
163	89	123	188	0	404	112	33	9	Cotton proceeds - Hail claims	0
4,135	4,341	4,458	5,079	5,202	6,051	5,587	5,375	5,607		7,695
EXPENSES										
161	94	125	113	123	148	114	166	113	Cartage	74
144	95	99	77	152	149	125	96	142	Chemical application	148
61	43	63	59	45	50	54	51	57	Chemicals - Defoliant	58
70	117	97	154	108	112	61	66	152	Chemicals - Herbicides	140
293	113	67	160	175	146	89	58	126	Chemicals - Insecticides	174
2	4	6	79	61	12	10	8	4	Chemicals - Others	10
50	70	38	14	14	0	6	4	2	Chipping	1
62	63	49	73	81	60	71	51	61	Consultants	70
57	258	321	201	192	253	292	237	153	Contract picking	144
85	133	126	30	17	97	114	208	154	Contract farming and ripping	152
10	7	3	24	8	51	64	98	90	Cotton picking wrap and sundries	98
142	251	208	298	423	112	183	158	226	Depreciation	411
15	15	16	76	124	115	20	93	13	Electricity	31
262	207	169	422	299	353	544	453	580	Fertiliser	485
224	411	280	444	298	213	233	244	418	Fuel and oil	349
8	0	0	3	0	35	6	16	42	Hire of plant	1
71	207	195	238	204	174	125	94	90	Insurance	159
65	152	259	220	221	298	287	305	300	Licence fee - Bollgard	192
39	22	50	45	60	43	51	42	69	Licence fee - Roundup ready	63
16	37	26	37	36	17	25	14	12	Motor vehicle expenses	14
105	103	64	147	145	87	66	103	118	R & M - Farming plant	146
45	141	70	114	221	54	122	119	174	R & M - Pumps and earthworks	334
75	84	99	112	108	102	136	103	87	Seed	154
28	14	1	107	30	61	126	150	238	Water charges	184
246	484	273	453	428	274	300	269	277	Wages - Employees	338
54	88	29	114	76	20	27	27	8	Wages - Proprietors	12
36	65	32	65	24	50	39	70	29	Administration	33
45	50	56	189	118	51	234	68	31	Other farm overheads	87
2,471	3,328	2,821	4,068	3,791	3,137	3,524	3,371	3,766		4,062
1,664	1,013	1,637	1,011	1,411	2,914	2,063	2,004	1,841	OPERATING PROFIT/(LOSS)	3,633
ADD:										
54	88	29	114	76	20	27	27	8	Wages - Proprietors	12
1,718	1,101	1,666	1,125	1,487	2,934	2,090	2,031	1,849	FARM OPERATING PROFIT/(LOSS)	3,645

3.3.2 TOP 20% FARMERS - THE PAST TEN YEARS (PER HA)

(continued)

2006	2007	2008	2009	2010	2011	2012	2013	2014		2015
DEDUCT:										
429	981	711	872	797	185	353	496	306	Interest and bank charges	257
10	0	0	0	0	0	0	0	0	Interest - Crop terms	0
439	981	711	872	797	185	353	496	306		257
\$1,279	\$120	\$955	\$253	\$690	\$2,749	\$1,737	\$1,535	\$1,543	FARM NET PROFIT/(LOSS)	\$3,388
CROP RESULTS										
921.24	644.33	701.35	556.97	789.00	1,124.75	1,186.93	833.94	2,365.17	Hectares of cotton grown	997.79
9,656.56	6,666.75	6,847.50	5,451.00	8,480.00	12,506.75	13,596.12	9,999.47	27,308.14	Total yield (bales)	14,283.13
10.48	10.35	9.76	9.79	10.75	11.12	11.45	11.99	11.55	Yield per hectare (bales)	14.31
\$378.96	\$410.89	\$443.99	\$499.72	\$484.00	\$507.94	\$477.90	\$445.47	\$484.87	Value per bale	\$537.62
\$235.67	\$321.74	\$288.83	\$415.45	\$352.51	\$282.04	\$307.69	\$281.13	\$326.34	Cost of production per bale	\$283.59
\$158.80	\$97.78	\$167.74	\$103.46	\$131.48	\$262.27	\$180.02	\$167.08	\$159.32	Operating profit per bale	\$254.03
6.52	8.10	6.35	8.14	7.83	6.17	7.37	7.57	7.77	cover operating expenses	7.55
7.68	10.49	7.95	9.88	9.47	6.54	8.12	8.68	8.40	cover total expenses	8.03
LABOUR										
290.92	138.07	280.54	139.24	157.80	176.43	228.26	325.44	337.46	Number of hectares per permanent person (excluding proprietors)	332.60
AVAILABLE TRACTOR HORSE POWER										
470.78	503.09	399.38	520.68	612.59	344.27	244.07	394.85	231.38	Tractor horse power per 500 hectares	469.70
AVAILABLE PICKING CAPACITY										
2.53	2.07	0.00	2.39	1.69	3.39	0.42	1.35	1.55	Picker heads per 500 hectares	3.67
ROTATION										
60.95%	56.91%	39.21%	47.88%	42.25%	70.38%	46.55%	18.32%	39.31%	Percentage of the current years' crop being grown on fallow fields or new fields (developed within the last three years)	77.77%
WATER USAGE										
10.22	9.00	9.00	9.00	9.00	8.60	11.72	9.59	8.11	Megalitres per hectare	6.38
0.97	0.87	0.92	0.92	0.84	0.77	1.02	0.80	0.70	Megalitres per bale	0.45

3.4 FIVE YEAR AVERAGE FOR TOP 20% AND AVERAGE PARTICIPANTS (PER HA) (2011, 2012, 2013, 2014, 2015)

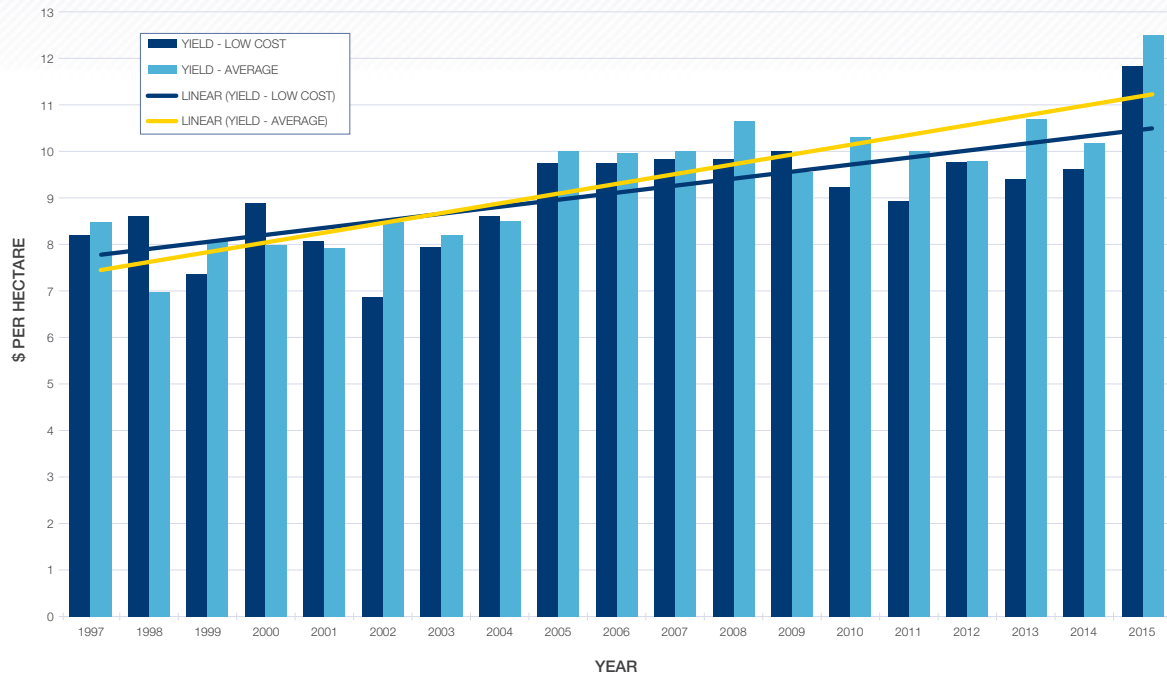
	ALL FARMS AVERAGE	TOP 20% AVERAGE	DIFFERENCE
INCOME			
Cotton proceeds - Lint	5,135	5,802	667
Cotton proceeds - Seed	691	842	151
Ginning	(598)	(649)	(51)
Levies	(40)	(44)	(4)
Cotton proceeds - Hail claims	52	112	60
	5,240	6,063	823
EXPENSES			
Cartage	115	123	(8)
Chemical application	134	132	2
Chemicals - Defoliants	52	54	(2)
Chemicals - Herbicides	102	106	(5)
Chemicals - Insecticides	91	119	(28)
Chemicals - Others	7	9	(2)
Chipping	2	3	(0)
Consultants	52	63	(10)
Contract picking	206	216	(9)
Contract farming and ripping	141	145	(4)
Cotton picking wrap and sundries	79	80	(1)
Depreciation	234	218	16
Electricity	61	54	6
Fertiliser	492	483	9
Fuel and oil	338	291	46
Hire of plant	38	20	18
Insurance	123	128	(6)
Licence fee - Bollgard	293	276	16
Licence fee - Roundup ready	59	54	5
Motor vehicle expenses	20	16	4
R & M - Farming plant	125	104	21
R & M - Pumps and earthworks	130	161	(30)
Seed	117	116	1
Water charges	217	152	65
Wages - Employees	397	292	106
Wages - Proprietors	23	19	4
Administration	59	44	15
Other farm overheads	125	94	31
	3,832	3,572	260
OPERATING PROFIT/(LOSS)	1,408	2,491	1,083
ADD:			
Wages - Proprietors	23	19	(4)
FARM OPERATING PROFIT/(LOSS)	1,430	2,510	1,077

3.4 FIVE YEAR AVERAGE FOR TOP 20% AND AVERAGE PARTICIPANTS (PER HA) (2011, 2012, 2013, 2014, 2015) (CONTINUED)

	ALL FARMS AVERAGE	TOP 20% AVERAGE	DIFFERENCE
DEDUCT:			
Interest and bank charges	352	319	32
Interest - Crop terms	2	0	2
	354	319	34
FARM NET PROFIT/(LOSS)	\$1,077	\$2,190	\$1,114
CROP RESULTS			
Hectares of cotton grown	1,109.18	1,301.72	192.53
Total yield (bales)	14,960.44	15,538.72	578.28
Yield per hectare (bales)	10.65	12.08	1.43
Value per bale	\$486.12	\$490.76	\$4.64
Cost of production per bale	\$360.34	\$296.16	\$64.18
Operating profit per bale	\$130.92	\$204.54	\$73.63
Number of bales per hectare required to cover operating expenses	7.92	7.29	0.64
Number of bales per hectare required to cover total expenses	8.66	7.95	0.71
LABOUR			
Number of hectares per permanent person (excluding proprietors)	235.92	280.04	(44.12)
AVAILABLE TRACTOR HORSE POWER			
Tractor horse power per 500 hectares	323.41	336.85	(13.44)
AVAILABLE PICKING CAPACITY			
Picker heads per 500 hectares	2.25	2.08	0.17
ROTATION			
Percentage of the current years' crop being grown on fallow fields or new fields (developed within the last three years)	49.28%	50.47%	1.18%
WATER USAGE			
Megalitres per hectare	8.71	8.88	(0.17)
Megalitres per bale	0.83	0.75	0.08

3.5 LOW COST FARMERS

3.5.1 GRAPH - COMPARISON OF EXPENSES AND YIELD FOR LOW COST AND AVERAGE LANDHOLDERS



3.5.2 LOW COST FARMERS – THE PAST 10 YEARS

2006	2007	2008	2009	2010	2011	2012	2013	2014		2015
INCOME										
3,754	3,669	3,997	4,769	4,268	4,508	4,749	4,313	4,444	Cotton proceeds - Lint	5,699
382	757	871	1,078	718	440	382	302	746	Cotton proceeds - Seed	1,156
(444)	(468)	(499)	(520)	(498)	(445)	(561)	(523)	(604)	Ginning	(710)
(26)	(35)	(34)	(46)	(30)	(29)	(31)	(28)	(51)	Levies	(56)
103	106	123	0	0	350	9	27	4	Cotton proceeds - Hail claims	7
3,769	4,029	4,458	5,281	4,458	4,824	4,548	4,091	4,539		6,096
EXPENSES										
123	81	125	171	91	122	88	121	100	Cartage	109
130	98	99	144	123	129	116	80	132	Chemical application	140
52	43	63	60	79	69	58	49	48	Chemicals - Defoliants	58
60	121	97	193	89	108	69	66	99	Chemicals - Herbicides	101
281	132	67	26	140	80	61	47	74	Chemicals - Insecticides	109
2	4	6	4	5	11	10	5	3	Chemicals - Others	5
71	70	38	11	14	0	2	0	1	Chipping	1
55	55	49	64	62	57	38	35	44	Consultants	16
124	302	321	339	361	258	295	90	246	Contract picking	169
91	104	126	23	29	64	130	380	102	Contract farming and ripping	33
12	6	3	38	3	43	61	72	61	Cotton picking wrap and sundries	90
126	176	208	191	332	141	179	207	189	Depreciation	269
9	12	16	29	7	66	33	29	21	Electricity	37
312	188	169	174	518	296	448	410	505	Fertiliser	444
242	356	280	272	347	201	202	299	337	Fuel and oil	284
6	0	0	1	3	11	52	67	70	Hire of plant	21
121	244	195	228	148	141	119	45	104	Insurance	87
107	110	259	310	308	315	281	175	317	Licence fee - Bollgard	277
9	19	50	60	53	55	53	29	67	Licence fee - Roundup ready	66
11	30	26	33	33	18	15	28	15	Motor vehicle expenses	18
115	89	64	110	147	77	80	60	115	R & M - Farming plant	84
59	107	70	86	88	58	49	51	79	R & M - Pumps and earthworks	124
68	85	99	114	160	101	165	104	75	Seed	133
21	9	1	26	13	144	181	192	308	Water charges	303
245	415	273	659	286	285	287	193	319	Wages - Employees	525
36	62	29	0	49	7	22	33	13	Wages - Proprietors	8
29	43	32	66	43	38	48	42	56	Administration	55
44	60	56	80	43	65	38	97	62	Other farm overheads	77
2,561	3,021	2,821	3,512	3,574	2,960	3,180	3,006	3,562		3,643
1,208	1,008	1,637	1,769	884	1,864	1,368	1,085	977	OPERATING PROFIT/(LOSS)	2,453
ADD:										
36	62	29	0	49	7	22	33	13	Wages - Proprietors	8
1,244	1,070	1,666	1,769	933	1,871	1,390	1,118	990	FARM OPERATING PROFIT/(LOSS)	2,461

3.5.2 LOW COST FARMERS – THE PAST 10 YEARS (continued)

2006	2007	2008	2009	2010	2011	2012	2013	2014		2015
DEDUCT:										
379	976	711	76	1,418	333	345	543	357	Interest and bank charges	194
7	0	0	0	0	0	0	65	0	Interest - Crop terms	0
386	976	711	76	1,418	333	345	608	357		194
\$858	\$94	\$955	\$1,693	(\$485)	\$1,538	\$1,045	\$510	\$633	FARM NET PROFIT/(LOSS)	\$2,267
CROP RESULTS										
1,453.60	812	701	568	713	1,276	1,532	1,014	1,934	Hectares of cotton grown	1,242
14,042.00	7,886.50	6,847.50	5,676.00	6,535.00	11,428.00	14,857.26	9,539.47	18,683.35	Total yield (bales)	14,707.30
9.66	9.72	9.76	9.99	9.17	8.95	9.70	9.41	9.66	Yield per hectare (bales)	11.84
\$379.55	\$403.66	\$443.99	\$528.61	\$486.02	\$499.65	\$468.02	\$431.96	\$469.31	Value per bale	\$514.36
\$264.95	\$310.51	\$288.83	\$351.21	\$389.29	\$330.42	\$327.83	\$319.61	\$368.46	Cost of production per bale	\$307.83
\$125.28	\$104.07	\$167.74	\$177.40	\$96.73	\$208.27	\$141.11	\$115.23	\$101.28	Operating profit per bale	\$207.08
6.74	7.48	6.35	6.64	7.35	5.92	6.79	6.96	7.58	Number of bales per hectare required to cover operating expenses	7.09
7.76	9.89	7.95	6.78	10.26	6.59	7.53	8.37	8.35	Number of bales per hectare required to cover total expenses	7.46
LABOUR										
242.27	162.30	280.54	94.67	237.50	168.91	283.74	368.71	443.85	Number of hectares per permanent person (excluding proprietors)	161.94
AVAILABLE TRACTOR HORSE POWER										
393.36	514.76	399.38	510.56	561.40	306.11	279.82	427.01	190.12	Tractor horse power per 500 hectares	432.90
AVAILABLE PICKING CAPACITY										
1.83	0.00	0.00	0.00	0.00	2.31	1.57	1.60	0.48	Picker heads per 500 hectares	2.76
ROTATION										
66.72%	49.29%	39.21%	70.42%	35.09%	70.67%	33.99%	19.32%	23.82%	Percentage of the current years' crop being grown on fallow fields or new fields (developed within the last three years)	52.80%
WATER USAGE										
9.19	9.00	9.00	9.00	9.00	8.67	10.45	7.53	7.30	Megalitres per hectare	8.22
0.95	0.93	0.92	0.90	0.98	0.97	1.08	0.80	0.76	Megalitres per bale	0.69

4

Appendices



APPENDIX A

DEFINITION OF TERMS

TOP 20% AND BOTTOM 20% (AVERAGE)

These figures represent the average results of those farmers who achieved the highest and lowest farm operating profit (after using an average cotton price for all growers).

BEST 'LOW COST' FARMERS

These figures represent the average results of those farmers who had the lowest farm operating expenses (before interest).

LARGE GROWERS

These figures represent the average results of those farmers who grew more than 2,500 hectares.

COMBINED AVERAGE OF FIVE YEARS TO 2015

These figures represent the average of the annual results of farmers in each category of the comparative analysis, over a five year period. We have also analysed the combined average of the Top 20% of farmers for comparative purposes.

LABOUR

These figures include all permanent employees or equivalent casuals (two casuals employed for three months each would represent half of a permanent employee). Proprietors have been excluded.

AVAILABLE TRACTOR HORSE POWER (ENGINE)

Includes all field tractors used for ripping, listing, spraying and cultivating, but excludes tractors used to operate module builders.

AVAILABLE PICKING CAPACITY

Only includes pickers owned by the farmer.

ROTATION

The portion of the current year's crop grown on fields fallowed in the previous year, or developed over the past four years, expressed as a percentage.

WATER USAGE

Includes the total megalitres of irrigation water used to grow the crop as well as the impact of beneficial rain. Rainfall figures during the growing season have been converted to megalitres after excluding light falls and a portion of falls over 100mm per month.

APPENDIX B

GUIDE TO INCOME AND EXPENSE ALLOCATIONS

COTTON PROCEEDS

The 'Cotton Proceeds – Lint' is net of premiums and discounts.

For farmers who received hail insurance claims, the amount received has been shown separately in the analysis. Where possible the hail claim has been grossed up to reflect the bales lost due to hail and the costs saved or additional costs incurred have been added or subtracted to reflect comparable figures.

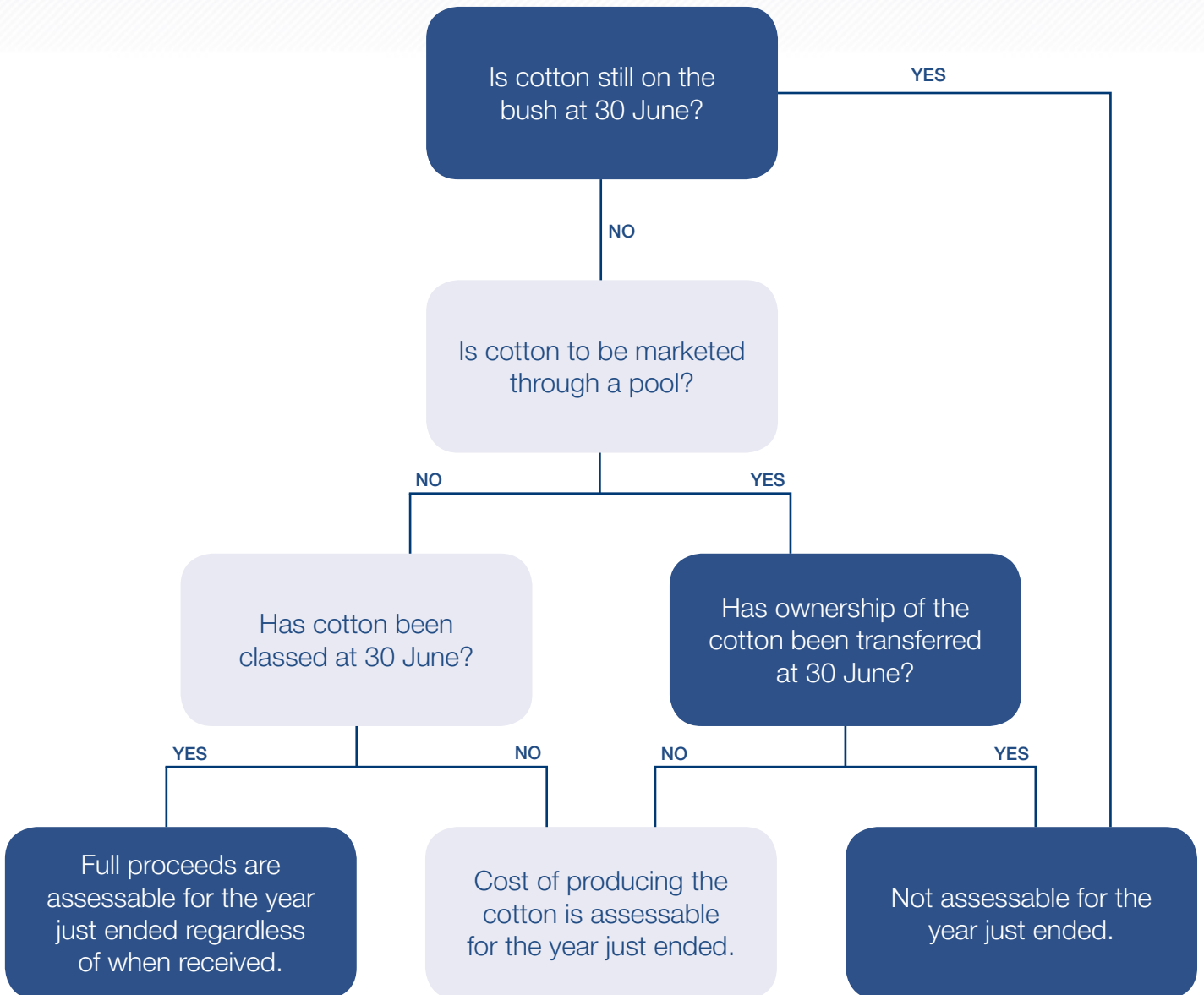
EXPENSES

Cartage	cartage (cotton module cartage, general cartage)
Chemical application	application by aircraft, application by ground rig
Chemicals – Defoliants	all defoliants and conditioners
Chemicals – Herbicides	herbicides used in field and on ditches, channels etc.
Chemicals – Insecticides	all insecticides
Chemicals – Other	growth regulants (pix) and all other chemicals
Chipping	chipping (chipping contractors, chipping wages), row weeders
Consultants	consultants (external and internal agronomist, bug checkers, marketing consultants)
Contract picking	contract picking (net of contract picking income on a swap basis, ie. hectare for hectare)
Contract farming and ripping	contract farming, contract ripping, contract stalk pulling, stick picking
Cotton wrap and picking sundries	cotton wrap and sundries (tarps and ropes, repairs to tarps)
Depreciation	depreciation
Electricity	electricity (electricity for bores, general electricity)
Fertiliser	fertiliser, gypsum
Fuel and oil	fuel and oil (net of diesel fuel rebate)
Hire of plant	hire of plant
Insurance	crop insurance, general insurance
Licence fee – Bollgard	licence fees paid to Monsanto for the Bollgard licence
Licence fee – Roundup Ready	licence fees paid to Monsanto for the Roundup Ready licence
Motor vehicle expenses	motor vehicle expenses (registration, motor vehicle insurance, R & M motor vehicle)

R & M – Farming plant	R & M pickers, R & M plant, R & M tractors, R & M small tools and hardware, R & M motor bikes
R & M – Pumps and earthworks	R & M irrigation earthworks, R & M irrigation pumps and motors
Seed	seed
Water charges and Purchases	water charges (charges from a state body, charges from a local water scheme, water purchases)
Wages – Employees	external wages (excluding chipping), payroll tax, secretarial fees, superannuation, workers compensation insurance, FBT
Wages – Proprietors	wages paid to a proprietor. If no wage is paid a notional amount, based on their involvement in the operation, has been included for each working proprietor. If the farm has more than one enterprise, the proprietors wage is split in accordance with normal allocation criteria
Administration	accountancy (all general work), administration, advertising, computer costs, computer processing, entertainment, filing fees, licences permits and fees, medical supplies, newspapers and periodicals, printing stationery and postage, protective clothing, seminars and conferences, staff amenities, staff training, subscriptions and donations, telephone, travel and accommodation
Other farm overheads	special accountancy work, audit, legal, rates, rent, R & M homestead, R & M employees' houses, R & M farm buildings, R & M fences, shade and shelter trees
Interest and bank charges	bank charges, borrowing expenses, bank interest, leasing, and hire purchase interest charges
Interest – Crop terms	interest on crop term finance (chemical suppliers and cotton merchants etc)

APPENDIX C

CHART OF ASSESSIBILITY OF COTTON PROCEEDS



Notes:

- The guaranteed minimum price of a GMP pool is assessable as cash. The balance is treated as a pool.
- 'Cost of producing' is the cost of severing the cotton from the land plus any other costs spent directly on the lint or seed prior to 30 June of that year.

The marketing of cotton is a complex issue. The taxation treatment relies on the wording of a particular contract.

This schedule is designed to provide general advice only. If you need specific advice, please contact us.

On this basis, we accept no liability for any errors or omissions.

APPENDIX D

COMMON SHAREFARMING AND LEASING ARRANGEMENTS

Below are some details of common practices.

- **Sharefarming (80% – 20% deal)**

80% of income to the sharefarmer.

20% of income to the landholder.

- Sharefarmer pays all operating costs.
- Landholder pays landholder's costs (rates) and costs to deliver water to the head ditch (pumping, water charges, and main channel maintenance).

- **Sharefarming (82% – 18% deal)**

82% of income to the sharefarmer.

18% of income to the landholder.

- Sharefarmer pays all costs except rates.

- **Leasing**

- A starting point is generally 4% – 6% of the value of the full watered developed area.



Australian Government
**Cotton Research and
Development Corporation**

Cotton Research and Development Corporation

2 Lloyd St
(PO Box 282)
Narrabri NSW 2390

Tel: (02) 6792 4088
Fax: (02) 6792 4400
Email: crdc@crdc.com.au

www.crdc.com.au



Boyce Chartered Accountants - Moree

39 Albert Street
(PO Box 614)
Moree NSW 2400

Tel: (02) 6752 7799
Fax: (02) 6752 7130
Email: infomoree@boyceca.com

www.boyceca.com