Appendix 15: Have BPPs Made a Difference?
(2005/06 to 2010/11)

G.R. Griffith[1]

1. Background

Beef Profit Partnership (BPP) members are encouraged to measure productivity and profitability variables in their beef enterprises on an annual basis. Some do, some don't, and the various BPPs have different rules for dealing with this. Most of the members who make these measurements do so in the context of their whole farm business, using software packages such as Profit Probe, MLA Cost of Production Calculator, Beef Cheque etc. Some of these profitability measures are different across states, depending on which software package is used. The profitability data analysis reported below relates to these annual measures provided by the BPP members and facilitators in the form in which they were calculated. Typically they are beef enterprise gross margins per kilogram of production and a measure of the cost of producing a kilogram of beef.

Of the 127 businesses in teams that have been going more than two years, 82 businesses now (i.e. financial year ending June 2011) have had annual profit measured on at least two occasions.

The BPP annual profitability data can be assessed in various ways, but to be able say whether being a BPP member has made a difference or not requires comparing the BPP member data to what their beef industry peers have achieved over the same time periods. This is done to remove, wherever possible, the influence of general environmental and market influences which would normally have a similar impact on all businesses within a defined region.

Since the BPP measures are based on whole farm data, two measures calculated by the Australian Bureau of Agricultural and Resource Economics and Sciences (ABARES) are the base controls chosen. ABARES conduct a large survey of broadacre agricultural enterprises across Australia every year and report the results in a number of different ways. The ABARES data provide a consistent benchmark across all BPPs, and it is a highly regarded and widely used measure of industry profitability.

One of the ABARES summary measures is "Farm Cash Income", which is the difference between total cash receipts from agricultural outputs and total cash costs paid out. Cash costs include some items normally classified as overhead costs. The other summary measure is "Farm Business Profit", which is farm cash income plus build-up in cattle inventories less depreciation of capital assets and the imputed value owner/operator and family labour. The BPP gross margins data does not match either summary definition exactly, but is closest to Farm Cash Income.

ABARES provide data segregated by type of industry (specialist, mixed and combined) and by State and by Region. The components of the broadacre survey data set relating to beef and lamb production is now freely available on the Meat and Livestock Australia web site (http://www.abareconomics.com/ame/mla/mla.asp). Wherever possible, the BPP profitability

[1] Cooperative Research Centre for Beef Genetic Technologies, and Adjunct Professor, New England Business School, University of New England, Armidale, NSW 2351. The author acknowledges the advice and support of Cynthia Mulholland, the BPP State Coordinators and the members and facilitators in the BPP network for the provision of the required data.

data has been matched against the appropriate ABARES regional data for the location where the BPP is located. A map of the various ABARES regions is given at http://www.abareconomics.com/ame/mla/regions.html. The category "specialist" beef producer was chosen. Even though many BPP members run mixed farming operations, the specialist category is chosen to minimise the impact of other farm enterprises such as cropping and sheep production, on outcomes from the beef enterprise.

In terms of appropriate regions, the NSW BPPs are predominately on the NSW northern tablelands, so the appropriate region is NSW Tablelands, even though the ABARES data cover farms in the central and southern tablelands as well. The Central QLD BPPs around Rockhampton are matched against the ABARES region South QLD Coastal, even though some BPP members may be located inland in the Central Highlands region. The Tallangatta Valley BPP in Victoria is matched against the Central North region while the Hamilton and Ballarat BPPs are matched against the Southern and Eastern Victorian region; and the WA BPPs are matched against the SW Coastal region. The Esperance BPP lies in the Central and South Wheatbelt region, but the number of specialist beef farms surveyed in this region is very low and in some years ABARES does not report any survey results for this region (and for some other regions) because of data reliability problems.

Both the annual measures of profitability from the BPP businesses and the measures of profitability from the ABARES survey show extreme variability across businesses, across regions and across time. Some indication of State by State variability over time is shown in Figure 1 below. Measures of the variability of ABARES farm cash income and farm business profit in the various regions and of selected individual BPPs over time are shown in the figures in the second part of the analysis.

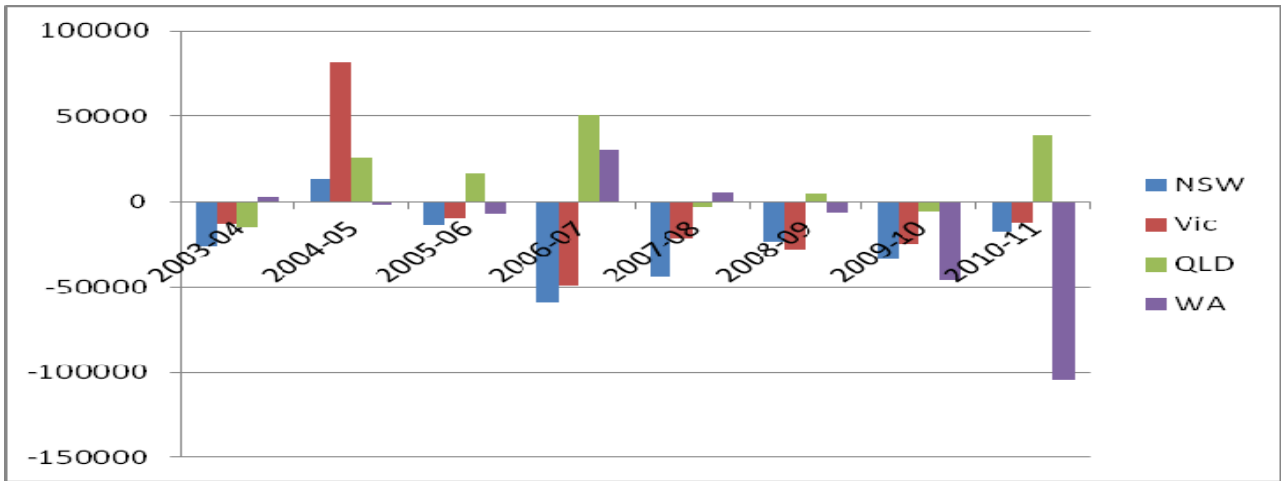

Figure 1. Farm Business Profit for Specialist Beef Production, $/farm, by State, 2003/04-2010/11 (source ABARES survey data)

2. Profitability Analysis Across all BPPs, Year on Year Changes, as at May 2012

Due to the different measures of profit available, and the fact that the data are quite patchy across businesses and over time, in this section all comparisons were done in terms of percentage changes between different years. The overall results are shown in Table 1a and Table 1b below.

Table 1a. Year by Year Comparisons, BPP members and ABARES Regional Data for Specialist Beef Producers, based on Farm Cash Income

State	Number of BPP businesses with at least two years of annual profit data	Total comparisons able to be made year on year	Beat ABARES by more than 5%	Beaten by ABARES	Businesses showing improvements of more than 20%
QLD	30	89	69	20	25 (41)
VIC	21	111	75	36	13 (46)
NSW	14	128	85	43	11 (35)
WA	17	88	33	55	9 (25)
Network	**82**	**416**	**262 (64%)**	**154 (32%)**	**58 (147)**

Table 1b. Year by Year Comparisons, BPP members and ABARES Regional Data for Specialist Beef Producers, based on Farm Business Profit

State	Number of BPP businesses with at least two years of annual profit data	Total comparisons able to be made year on year	Beat ABARES by more than 5%	Beaten by ABARES	Businesses showing improvements of more than 20%
QLD	30	89	58	31	25 (41)
VIC	21	111	57	54	13 (46)
NSW	14	128	51	77	11 (35)
WA	17	88	50	38	9 (25)
Network	**82**	**416**	**216 (52%)**	**200 (48%)**	**58 (147)**

Overall, about two-thirds of all year-on-year comparisons that were able to be made indicated that BPP partners generated greater improvements in profit (by more than 5%) than the average specialist beef producer in their immediate region, as measured by ABARES farm survey processes and the specific criterion Farm Cash Income. The proportion was somewhat lower for the specific criterion Farm Business Profit, at 52%.

Some producers are doing very well. 58 of the 82 businesses for which annual data are available have achieved a 20% improvement in profit on at least one occasion, and on average close to three occasions.

3. Profitability Analysis for Individual BPPs, Long Run Trends, as at May 2012

Seven of the longest running BPPs now have data for at least five years. This is sufficient to be confident about long run trends. The analysis in this section examines those trends.

Victoria

Three of the seven long running BPPs are in Victoria: Hamilton BPP in the south west, Ballarat BPP in the central part of the state and Tallangatta Valley BPP in the north east, near Wodonga.

The trend in gross margins (GM) for the Tallangatta Valley BPP is shown in Figure 2 below for the period 2006/07 to 2010/11. Gross margins have consistently risen over the period that the BPP

has been in operation. The trend line indicates that the gross margins achieved by the members of this BPP increased on average by $0.2886c/kg/year, or by $130/head/year, given an average live weight of 450kgs.

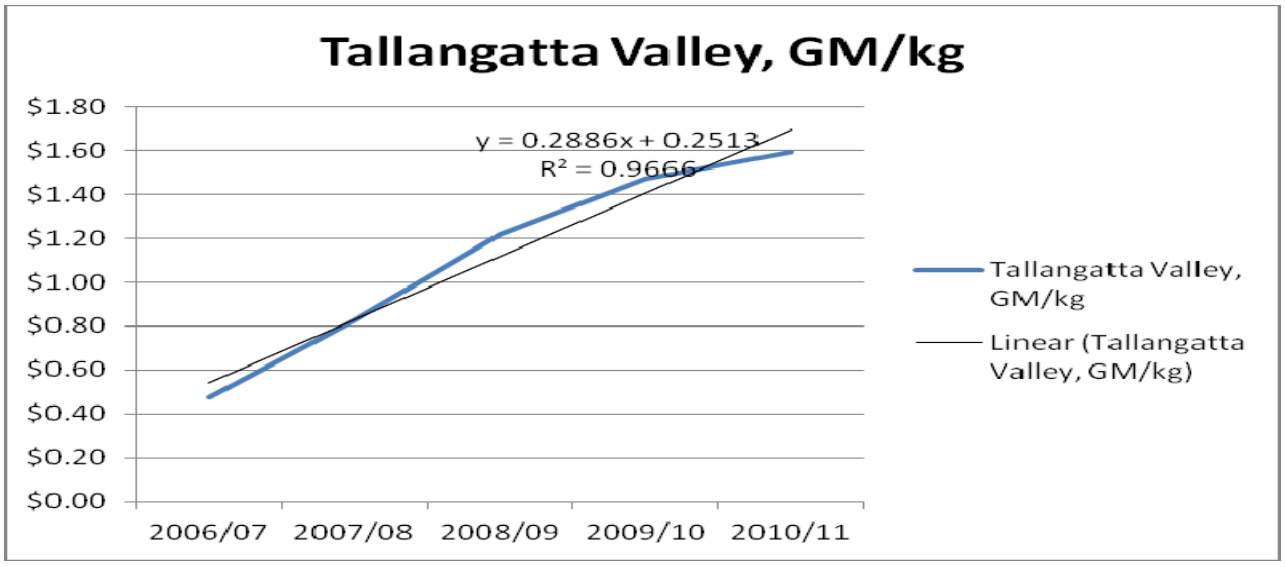

Figure 2. Tallangatta Valley BPP, GM/kg, 2006/07-2010/11

The appropriate comparable ABARES region for the Tallangatta Valley BPP is Central North Victoria.

ABARES's measure of farm cash income, $/farm across Central North Victorian specialist beef enterprises which meet the survey criteria, is graphed in Figure 3a below for the period 2005/06 to 2010/11. The trend line indicates an increase in profit of $8,585 each year. For the average Central North Victorian specialist herd size of 343 (from the ABARES survey data), this increase in profit amounts to $25.03 per head, or about $0.056/kg/year given an average live weight of 450kgs.

ABARES's measure of farm business profit, $/farm across Central North Victorian specialist beef enterprises which meet the survey criteria, is graphed in Figure 3b below for the period 2005/06 to 2010/11. The trend line indicates an increase in profit of $10,692 each year. For the average Central North Victorian specialist herd size of 343, this increase in profit amounts to $31.17 per head, or about $0.069/kg/year given an average live weight of 450kgs.

The difference between the outcomes for the Tallangatta Valley BPP members and the average specialist beef producer in Central North Victoria is $0.23c/kg/year or $105/head/year based on farm cash income, or $0.21c/kg/year or $99/head/year based on farm business profit. Across the 3600 cattle managed by Tallangatta Valley BPP members, this difference equals $356,000 - $378,000 per year, every year.

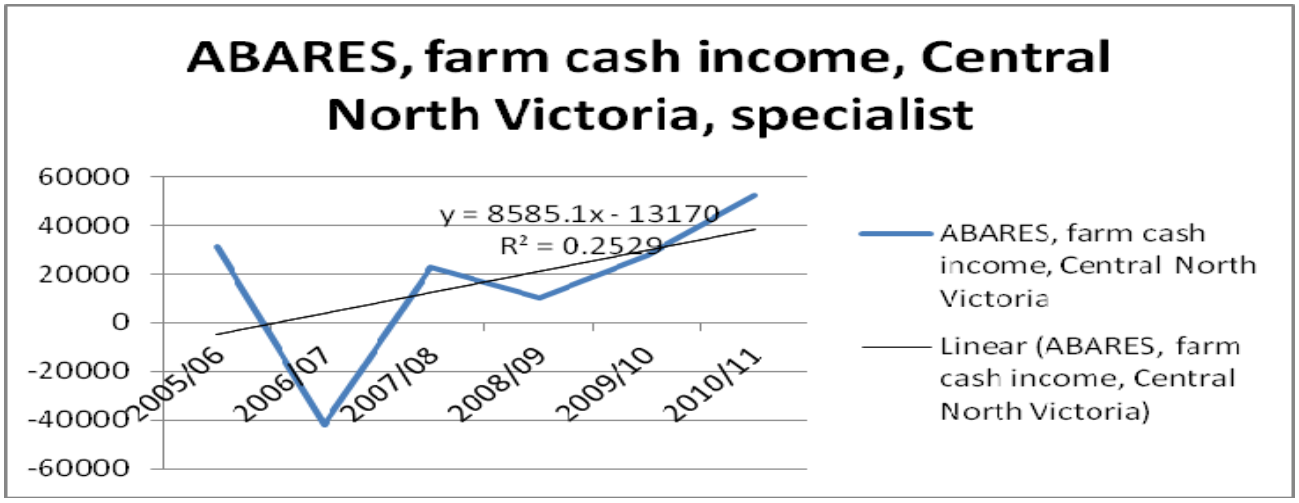

Figure 3a. ABARES Farm Cash Income, $/farm, Central North Victoria Specialist Beef Producer

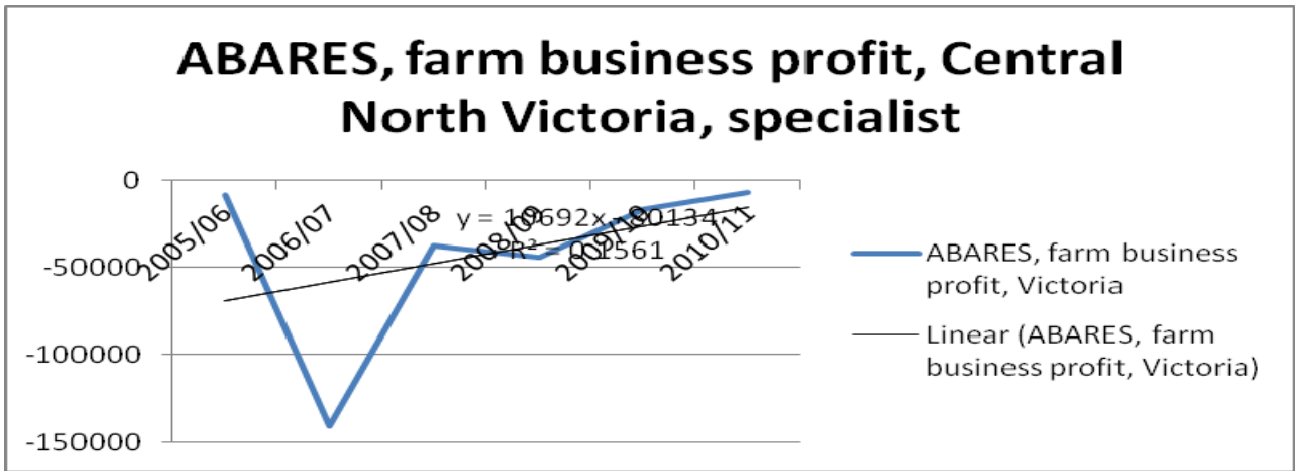

Figure 3b. ABARES Farm Business Profit, $/farm, Central North Victoria Specialist Beef Producer

The trend in gross margins for the Ballarat BPP is shown in Figure 4 for the same period. The trend line indicates that the gross margins achieved by the members of this BPP increased on average by $0.1711c/kg/year, or by $77.00/head/year.

The Ballarat and Hamilton BPPs are most closely aligned to ABARES' broad Southern and Eastern Victoria region.

ABARES' measure of farm cash income for specialist beef enterprises in this region which meet the survey criteria, is graphed in Figure 5a for the period 2005/06 to 2010/11. The trend line indicates a decrease in farm cash income of $5,932 each year. For the average Southern and Eastern Victorian specialist herd size of 380, this amounts to a loss of $15.61 per head, or about $0.037/kg/year given an average live weight of 450kgs.

ABARES' measure of farm business profit for specialist beef enterprises in this region which meet the survey criteria, is graphed in Figure 5b for the period 2005/06 to 2010/11. The trend line indicates an increase in profit of $1,364 each year. For the average Southern and Eastern Victorian specialist herd size of 380, this amounts to a gain of $3.59 per head, or about $0.008/kg/year given an average live weight of 450kgs.

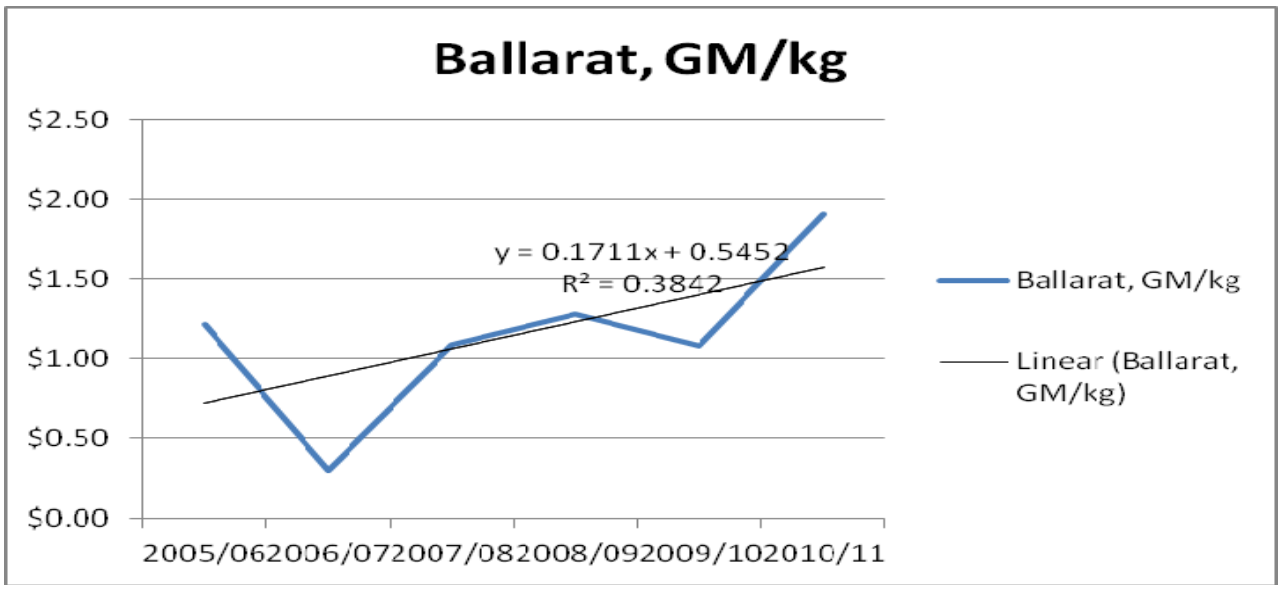

Figure 4. Ballarat BPP, GM/kg, 2005/06-2010/11

The difference between the outcomes for the Ballarat BPP members and the average specialist beef producer in Southern and Eastern Victoria is $0.21c/kg/year or $93/head/year based on farm cash income, or $0.16c/kg/year or $73/head/year based on farm business profit. Across the 3300 cattle managed by Ballarat BPP members, this difference equals over $242,000 - $306,000 per year, every year.

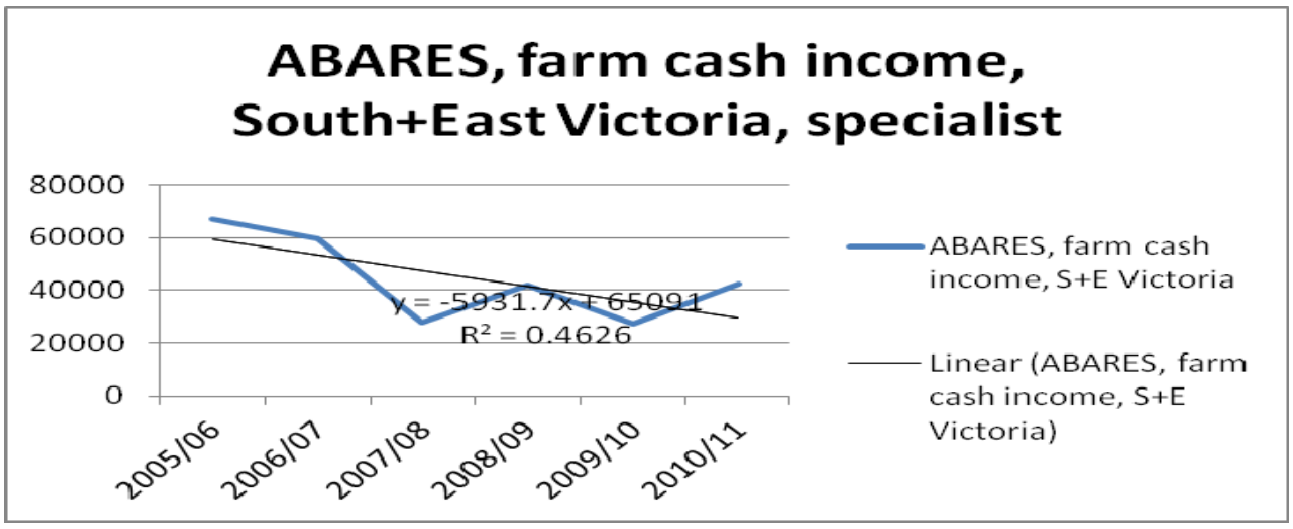

Figure 5a. ABARES Farm Business Profit, $/farm, Southern and Eastern Victoria Specialist Beef Producer

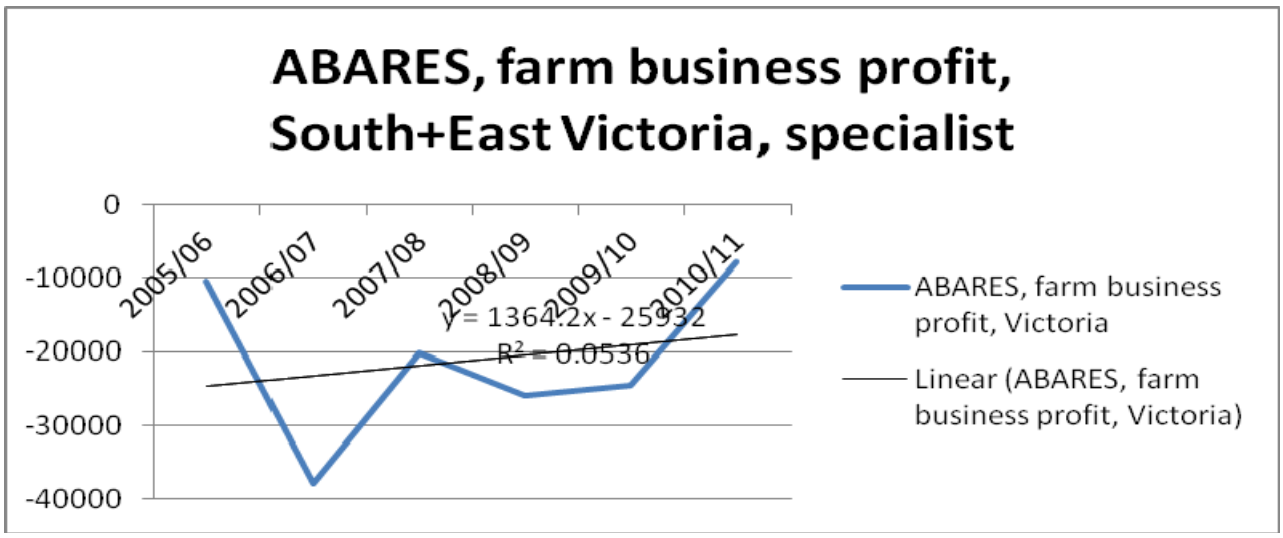

Figure 5b. ABARES Farm Business Profit, $/farm, Southern and Eastern Victoria Specialist Beef Producer

Finally, the trend in gross margins for the Hamilton BPP is shown in Figure 6 for the period 2005/06 to 2009/10. The trend line indicates that the gross margins achieved by the members of this BPP increased on average by $0.0259c/kg/year, or by $11.66/head/year.

The difference between the outcomes for the BPP members and the the average specialist beef producer in Southern and Eastern Victoria is $0.063c/kg/year or $28/head/year based on farm cash income, or $0.018c/kg/year or $8/head/year based on farm business profit. Across the 9700 cattle managed by Hamilton BPP members, this difference equals between $78,000 - $265,000 per year, every year.

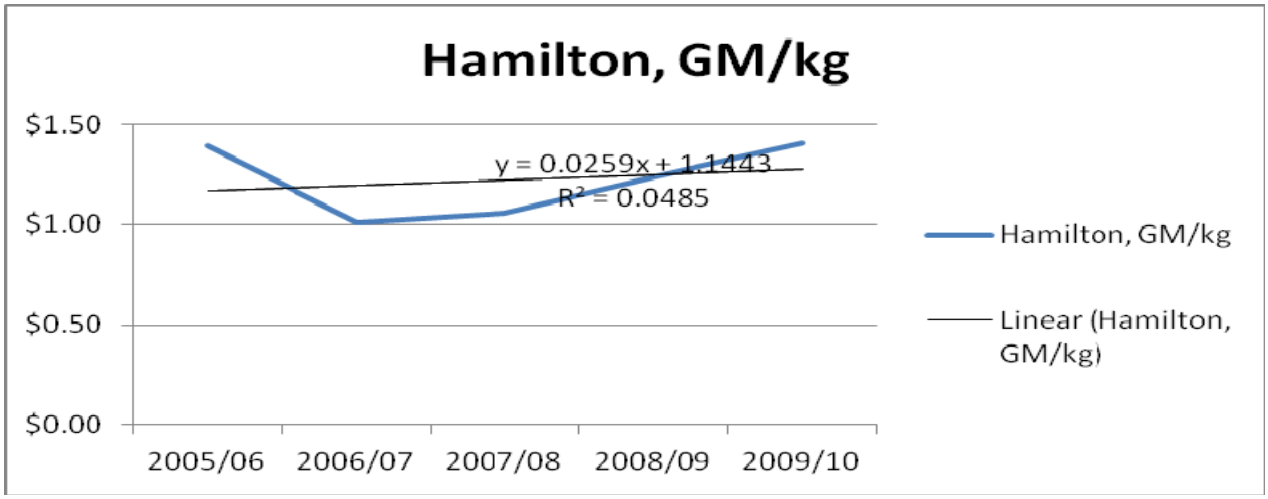

Figure 6. Hamilton BPP, GM/kg, 2005/06-2009/10

Western Australia

Most of the WA BPPs are in the south west corner of the state. Esperance is located in the ABARES region Central and South Wheatbelt region, but as noted above the numbers of specialist beef farms surveyed in this region is very low and in some years ABARES does not release any data for this type of farm in this region. Thus South West Coastal was the next best choice.

ABARES' measure of farm cash income, $/farm across all South West Coastal Western Australian specialist beef enterprises which meet the survey criteria, is graphed in Figure 7a for the period 2005/06 to 2010/11. The trend line indicates an increase in farm income of $5,767 each year. For the average herd size for this sample group of 639, this increase in income amounts to $9.03 per head, or about $0.020/kg/year given an average live weight of 450kgs.

ABARES' measure of farm business profit, $/farm across all South West Coastal Western Australian specialist beef enterprises which meet the survey criteria, is graphed in Figure 7b for the period 2005/06 to 2010/11. The trend line indicates a fall in profit of $6,523 each year. For the average herd size for this sample group of 639, this fall in profit amounts to $10.21 per head, or about $0.023/kg/year given an average live weight of 450kgs.

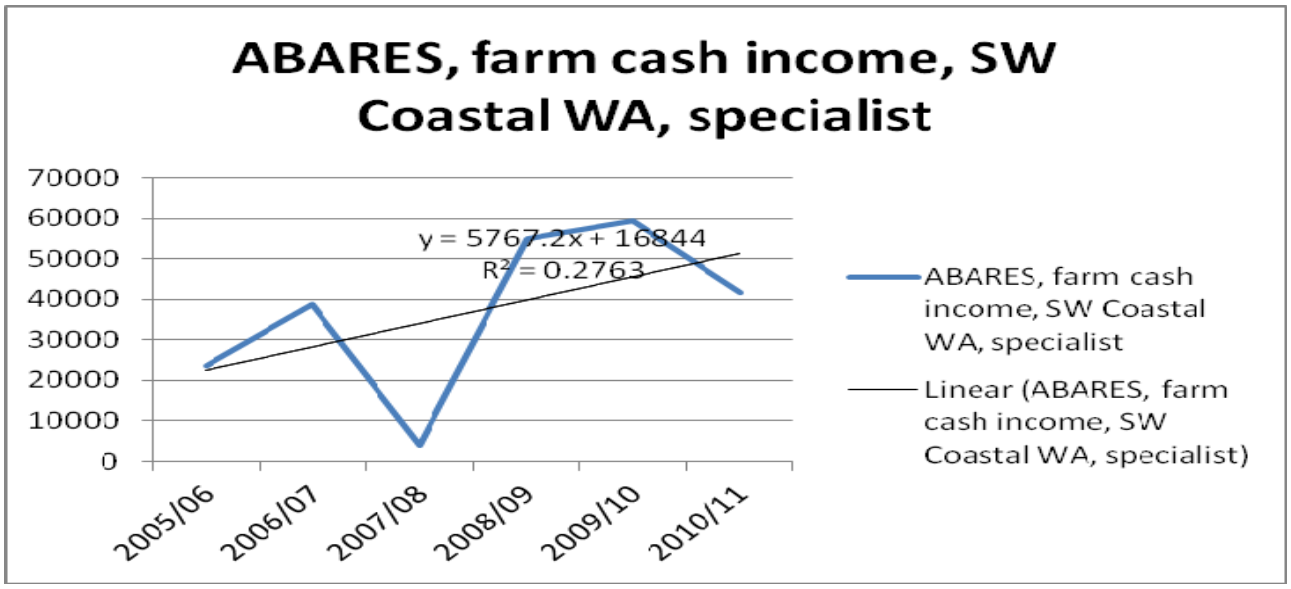

Figure 7a. ABARES Farm Business Profit, $/farm, South West Coastal Western Australia Specialist Beef Producer

The trend in gross margins for the Esperance BPP is shown in Figure 8 for the period 2005/06 to 2010/11. The trend line indicates that the gross margins achieved by the members of this BPP increased on average by $0.0547c/kg/year, or by $24.75/head/year.

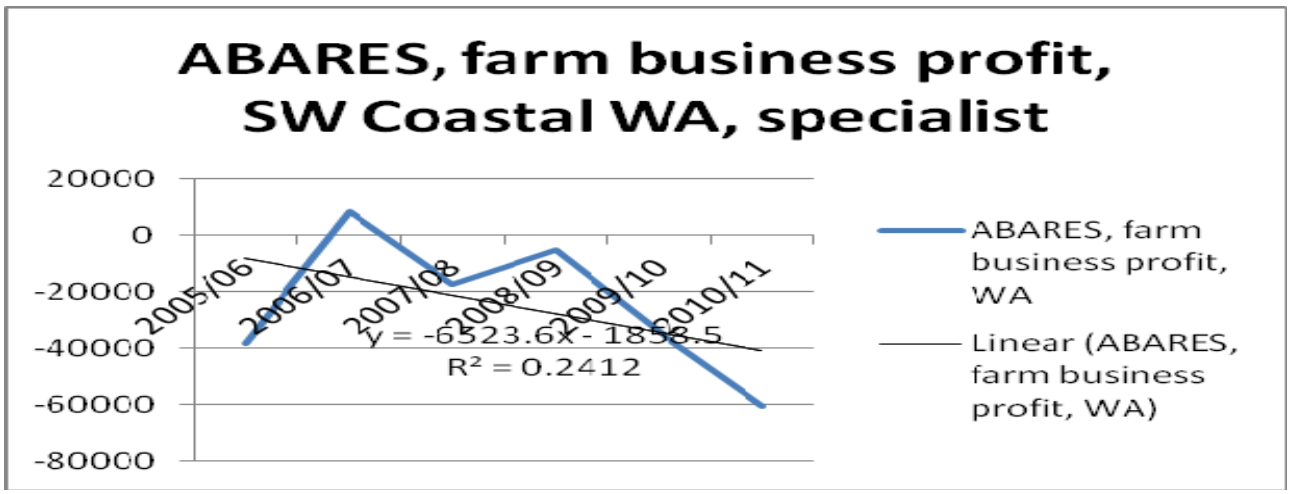

Figure 7b. ABARES Farm Business Profit, $/farm, South West Coastal Western Australia Specialist Beef Producer

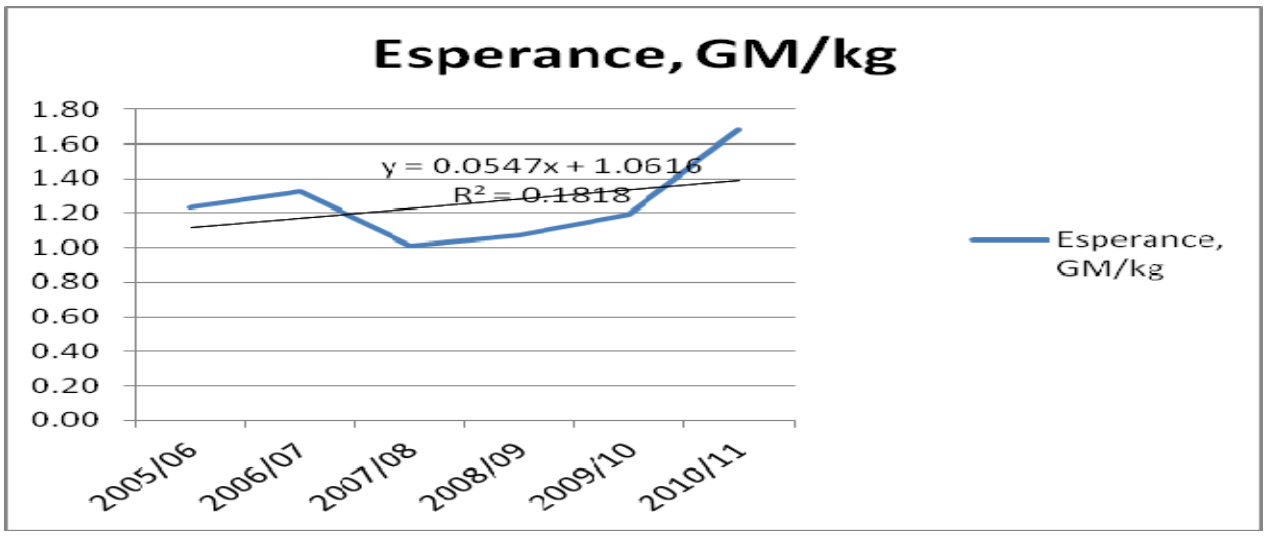

Figure 8. Esperance BPP, GM/kg, 2005/06-2010/11

The difference between the outcomes for the BPP members and the average South West Coastal Western Australian specialist beef producer is $0.035c/kg/year or $16/head/year based on farm cash income, or $0.078c/kg/year or $35/head/year based on farm business profit. Across the 20900 cattle managed by Esperance BPP members, this difference equals between $329,000-$731,000 per year, every year.

<u>New South Wales</u>

All of the NSW BPPs are located in the north east area, predominately on the New England Tablelands. The ABARES measure of farm cash income, $/farm across all NSW Tablelands specialist beef enterprises which meet the survey criteria, is graphed in Figure 9a for the period 2004/05 to 2010/11. The trend line indicates a fall in income of $4,165 each year. For the average NSW Tablelands specialist herd size of 502, this amounts to $8.30 per head, or about $0.018/kg/year given an average live weight of 450kgs.

The ABARES measure of farm business profit, $/farm across all NSW Tablelands specialist beef enterprises which meet the survey criteria, is graphed in Figure 9b for the period 2004/05 to 2010/11. The trend line indicates a fall in profit of $3209 each year. For the average NSW Tablelands specialist herd size of 502, this amounts to $6.39 per head, or about $0.014/kg/year given an average live weight of 450kgs.

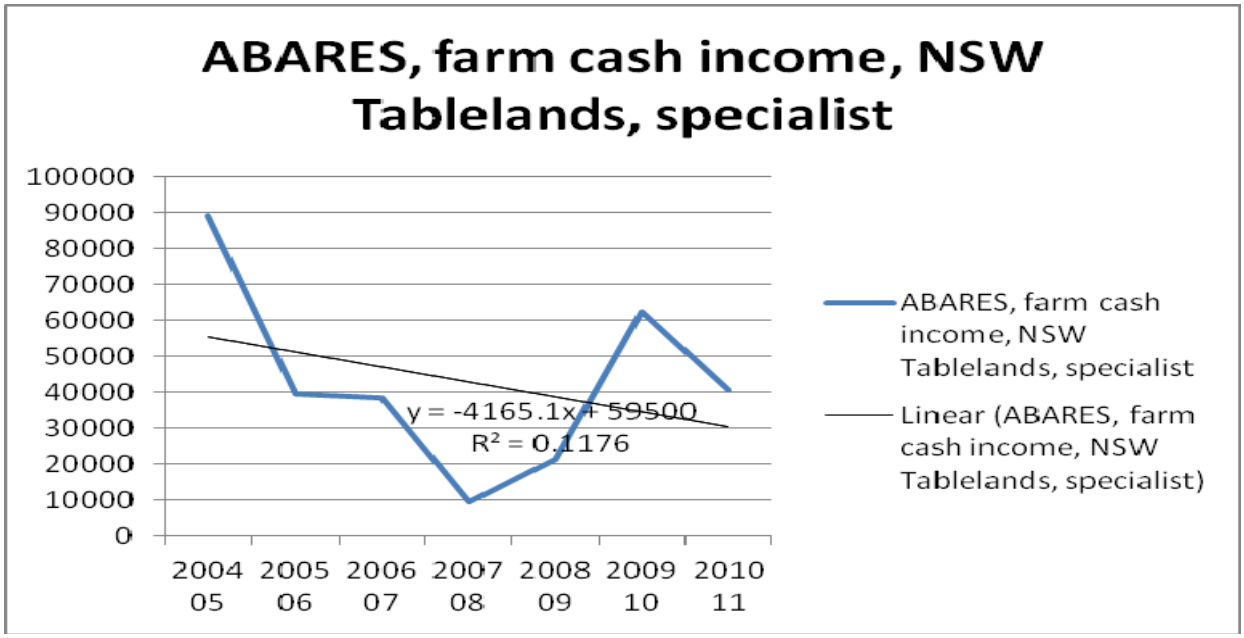

Figure 9a. ABARES Farm Cash Income, $/farm, NSW Tablelands Specialist Beef Producer

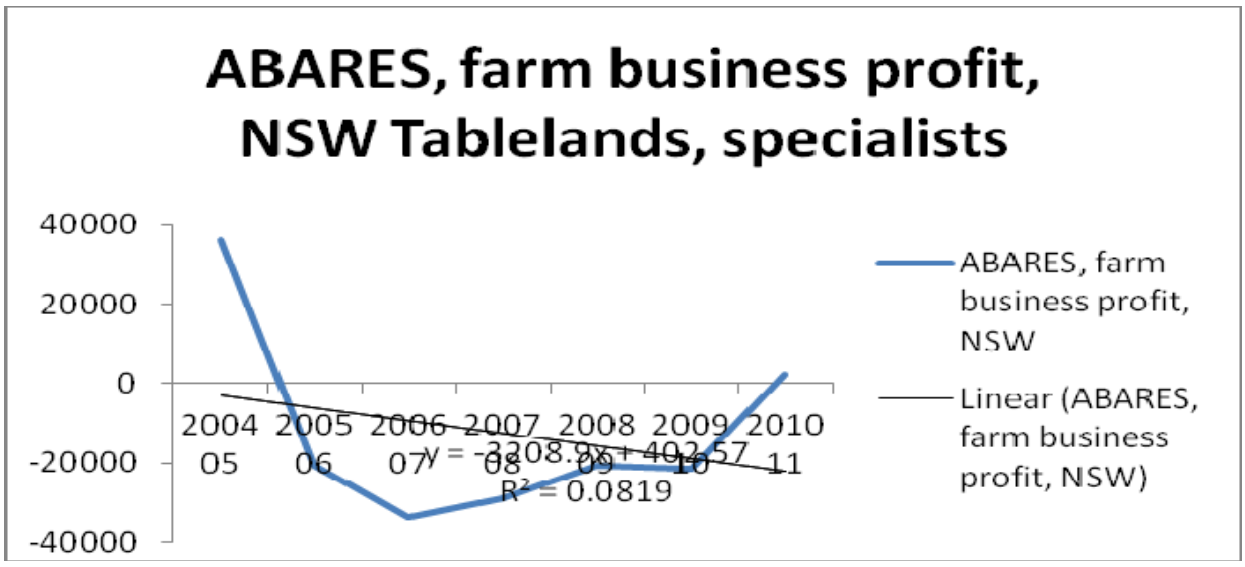

Figure 9b. ABARES Farm Business Profit, $/farm, NSW Tablelands Specialist Beef Producer

The trend in gross margins for the Ebor BPP is shown in Figure 10 for the period 2004/05 to 2010/11. The trend line indicates that the gross margins achieved by the members of this BPP increased on average by $0.0615c/kg/year, or by $27.68/head/year.

The difference between the outcomes for the BPP members and the average NSW Tablelands specialist beef producer is $0.08c/kg/year or $36/head/year based on farm cash income, or $0.076c/kg/year or $34/head/year based on farm business profit. Across the 8850 cattle managed by Ebor BPP members, this difference equals between $302,000 - $319,000 per year, every year.

The trend in gross margins for the Guyra BPP is shown in Figure 11 for the period 2004/05 to 2010/11. The trend line indicates that the gross margins achieved by the members of this BPP increased on average by $0.0516c/kg/year, or by $23.40/head/year.

The difference between the outcomes for the BPP members and the average NSW Tablelands specialist beef producer is $0.07c/kg/year or $32/head/year based on farm cash income, or $0.066c/kg/year or $30/head/year. Across the 9500 cattle managed by Ebor BPP members, this difference equals between $285,000 - $301,000 per year, every year.

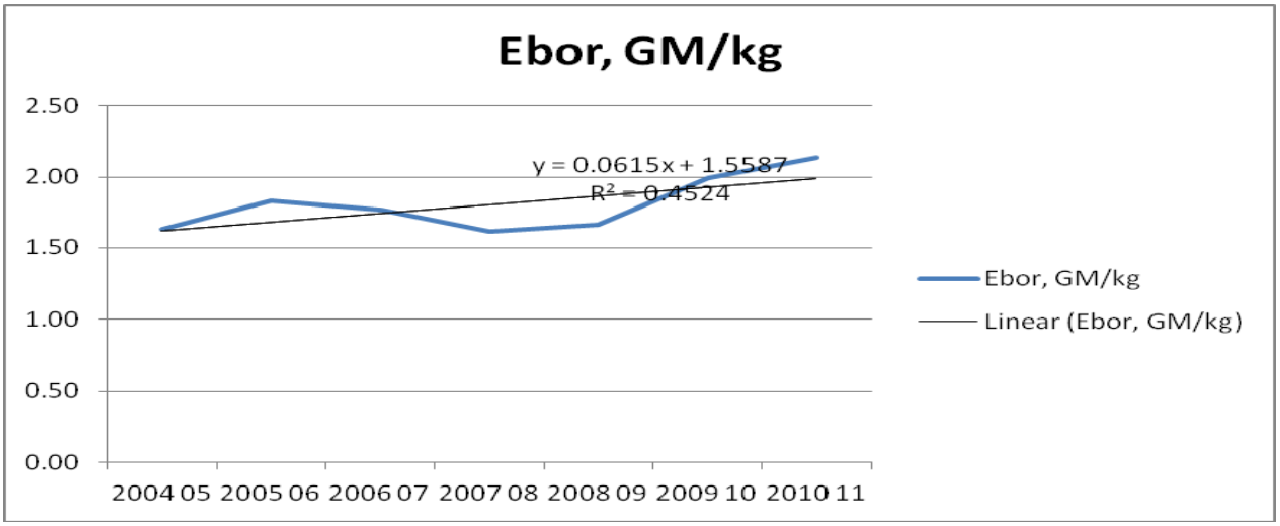

Figure 10. Ebor BPP, GM/kg, 2004/05-2010/11

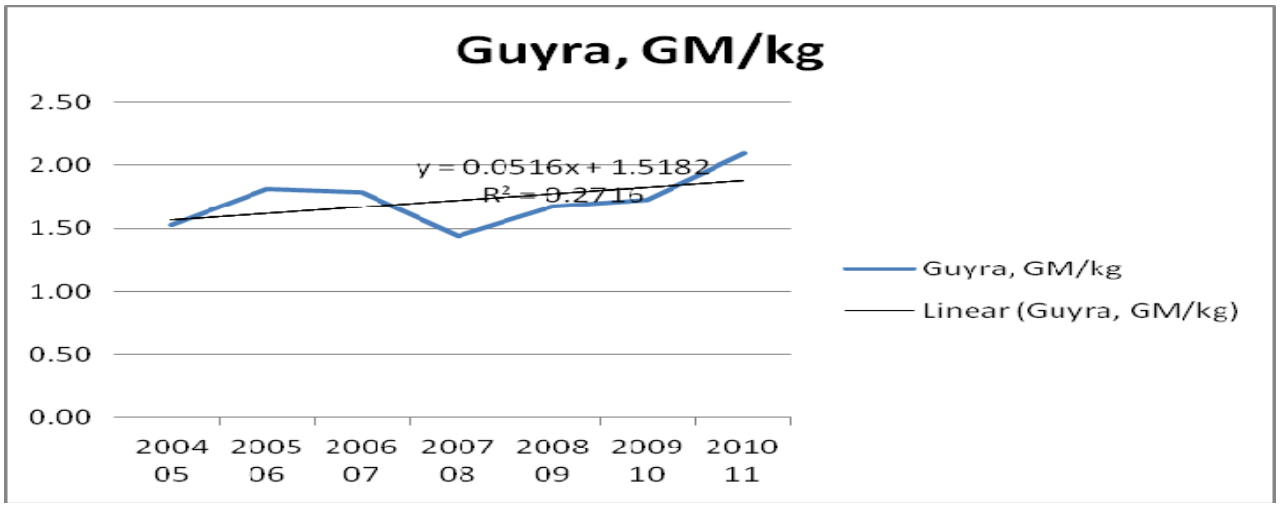

Figure 11. Guyra BPP, GM/kg, 2004/05-2010/11

Queensland

The only BPP in QLD which has reported more than three years of profit data is the Mckenzie River group in Central QLD, in the Rockhampton area.

ABARES's measure of farm cash income, $/farm across South QLD Coastal specialist beef enterprises which meet the survey criteria, is graphed in Figure 12a for the period 2005/06 to 2009/10. The trend line indicates a fall in income of $3,361 each year. For the average South QLD Coastal specialist herd size of 816, this amounts to $4.12 per head, or about $0.009/kg/year given an average live weight of 450kgs.

ABARES's measure of farm business profit, $/farm across South QLD Coastal specialist beef enterprises which meet the survey criteria, is graphed in Figure 12b for the period 2005/06 to 2009/10. The trend line indicates a fall in profit of $11,460 each year. For the average South QLD

Coastal specialist herd size of 816, this amounts to $14.04 per head, or about $0.031/kg/year given an average live weight of 450kgs.

The McKenzie River BPP report profitability in different terms, EBIT/ha. The trend in EBIT/ha for the McKenzie River BPP is shown in Figure 13 for the same period. The trend line indicates that the EBIT/ha achieved by the members of this BPP decreased on average by $3.74/ha/year.

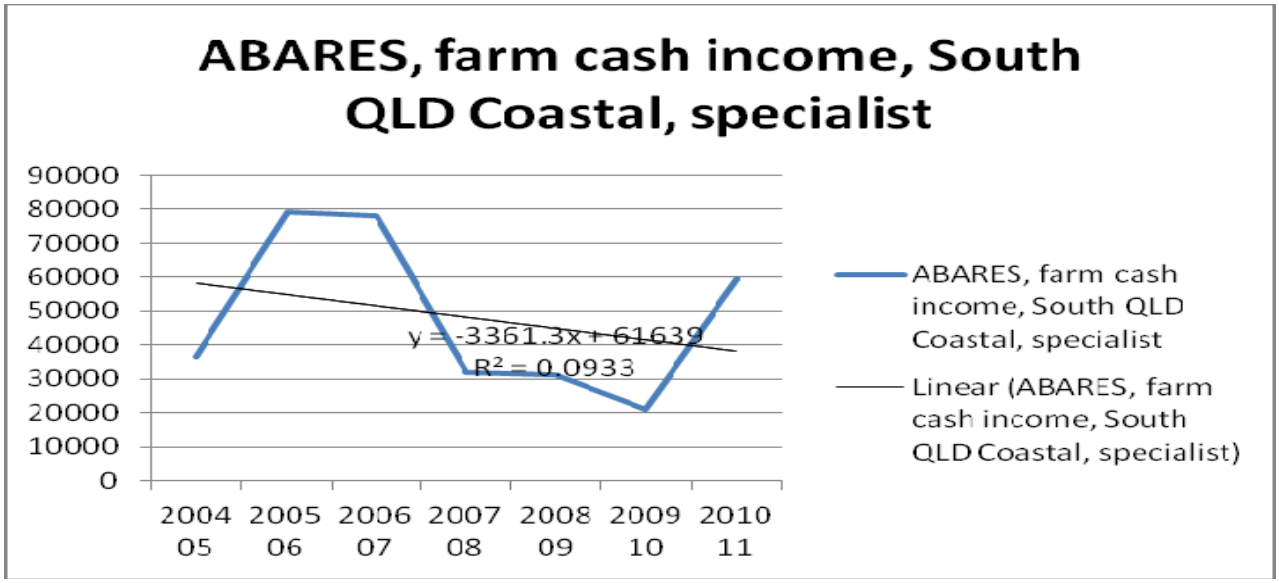

Figure 12a. ABARES Farm Business Profit, $/farm, South QLD Coastal Specialist Beef Producer

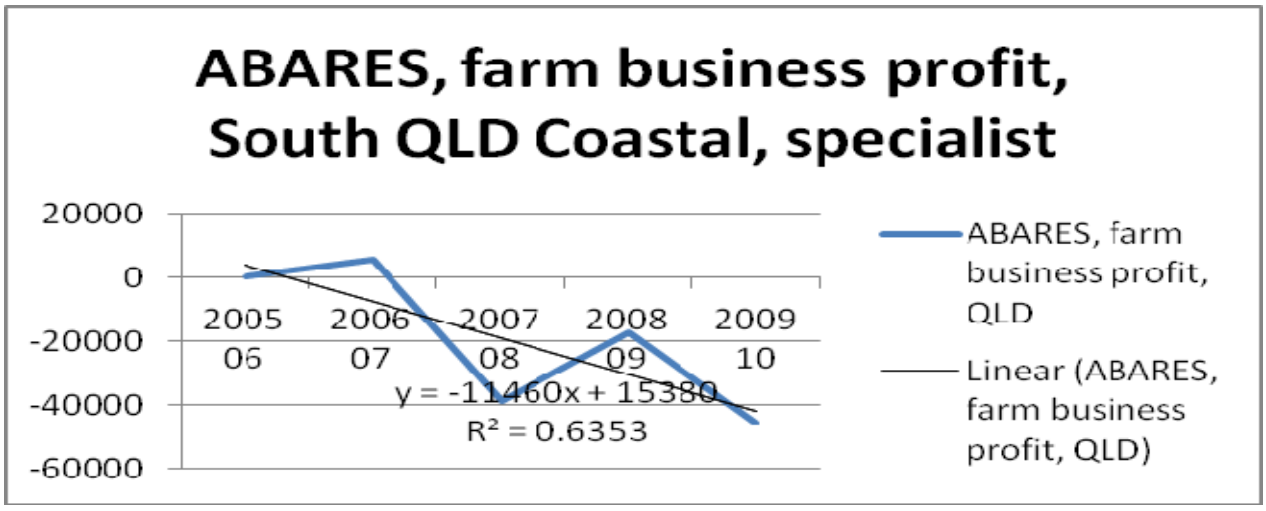

Figure 12b. ABARES Farm Business Profit, $/farm, South QLD Coastal Specialist Beef Producer

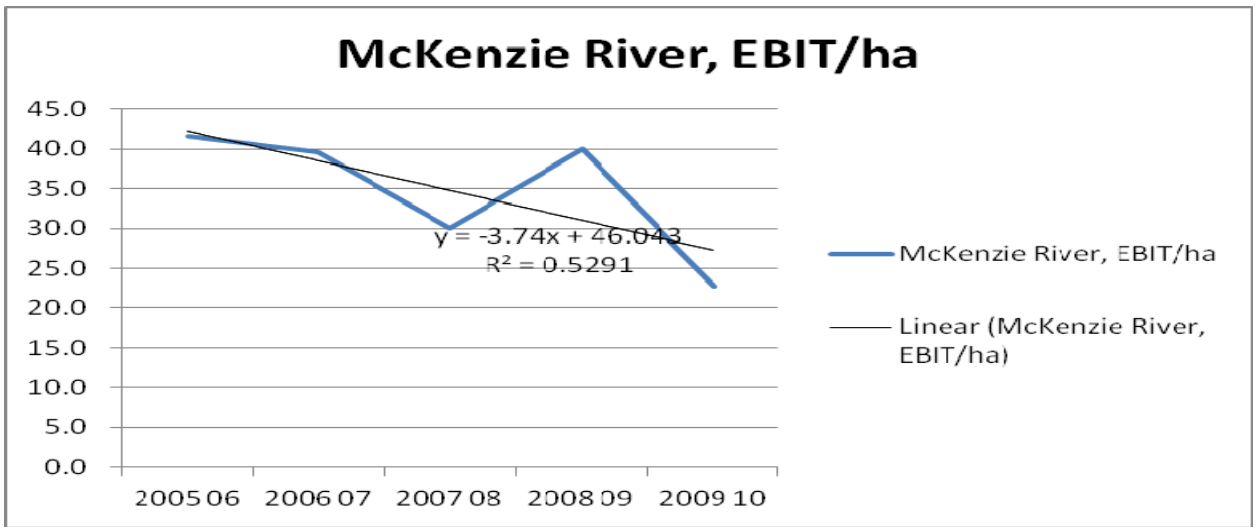

Figure 13. Mckenzie River BPP, EBIT/ha, 2005/06-2009/10

The average area operated by South QLD Coastal specialist beef producers is 3532 ha. Thus the underlying fall in farm cash income of $3,361 each year is about $0.95/ha, while the underlying fall in farm business profit of $11,460 each year is about $3.24/ha.

The McKenzie River BPP members were doing marginally worse than their regional counterparts, over the period 2005/06 to 2009/10.

4. Aggregating Across the BPP Network, 2006/07 to 2011/12

The aggregate benefits to date flowing from the BPP network are shown in Table 2.

Table 2. Aggregate benefits of the BPP network, 2006/07 to 2011/12

	$/hd	cattle	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12
Ebor	34	8850	$300,900	$300,900	$300,900	$300,900	$300,900	$300,900
Guyra	30	9500				$285,000	$285,000	$285,000
other NSW BPP	15	30000						$450,000
rest of NSW	15							
Esperance	16	20900	$334,4000	$334,4000	$334,4000	$334,4000	$334,400	$334,400
other WA BPP	8	27091					$216,700	$216,700
rest of WA	8							
Ballarat	73	3300	$240,900	$240,900	$240,900	$240,900	$240,900	$240,900
Tallangatta Valley	99	3600		$356,400	$356,400	$356,400	$356,400	$356,400
Hamilton	8	9700	$77,600	$77,600	$77,600	$77,600	$77,600	$77,600
rest of VIC	10							
NQ	16	140000	$2,300,000	$2,300,000	$2,300,000	$1,100,000	$1,100,000	$1,100,000
CQ			$500,000	$500,000	$500,000	$500,000	$500,000	$500,000
rest of QLD	10							
TOTAL, actual + predicted			$3,753,800	$4,110,200	$4,110,200	$3,195,200	$3,411,928	$3,861,928

The total value to date is $22.443m.

This is made up of four components. First, the aggregate benefits for the six individual BPPs in NSW, WA and Victoria calculated above are copied into the table starting from the year in which they commenced. The lowest of the farm cash income or farm business profit based values are used. The average annual benefits are assumed to continue at the same rate into the current year, even though all of the trend lines suggest that the gap between BPP performance and regional average producer performance year is widening.

Second, there are six other BPPs in WA and three other BPPs in NSW which have commenced recently and so there are not enough data points available to conduct a trend analysis. We know the number of cattle managed in these other existing BPPs, and we conservatively assume they will generate benefits at approximately half the level of the long-term measured BPPs.

Third, the McKenzie River BPP in Central QLD is line ball with regional peers and we do not have the data to calculate the benefits to other individual BPPs in QLD using trend analysis. However we have some other information on the benefits from actual changes made by members in the North QLD group of BPPs. The average improvement achieved across five North Queensland BPPs due to BPP interventions was about $14 per adult equivalent (AE) for breeding stock and about $43/AE for sale stock. These 26 North Queensland businesses control some 140,000 cattle. Hence the annual improvement in profit achieved in these businesses alone was more than $2.3 million. We do not have similar data for the six central QLD BPPs, but we conservatively estimate $0.5m per year.

Finally, for other purposes we need to predict the value of the BPP network into the future. We estimate that due to planned BPP forums, newsletters, and publication and communication of these current findings across the broader industry, the benefits of being part of the BPP network will gradually diffuse through the wider regional beef industries. We conservatively assume that these spill-overs into the wider industry will gradually increase until some 5% of each States' cattle herd will be impacted, five years from now. We conservatively assume these businesses will generate benefits at approximately half the level of the long term measured BPPs. Using this methodology it is predicted that the operation of the BPP network will generate additional net income of some $110 million for the Australian beef industry by 2020.