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Welfare Benefits: the changing face of the Queensland beef industry.

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Abstract

Australian agriculture has suffered from a long-term decline in its terms of trade and a persistent cost-price squeeze. The effects on farm viability have led to declining and aging rural populations, rising rural unemployment, and substantial agricultural restructuring. To cushion these effects and assist in rural restructuring Australian State and Federal Governments have provided support to primary producers including drought aid, reconstruction aid and other support mechanisms. In Queensland the principle agency responsible for providing this support is the Queensland Rural Adjustment Authority (QRAA). This paper will examine the recent pattern of support QRAA has provided the Queensland beef industry and comment on its effectiveness and flow-on effects.

Keywords: welfare, restructuring, beef industry

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1.0 Introduction

The agriculture sector in Australia has undergone a major transformation over the past fifty years. In common with many other developed countries, the proportion of the population involved in agriculture has declined, and the role of agriculture has shrunk as a contributor to the national economy. Restructuring, capital intensification and the adoption of technology has led to substantial increases in production at the same time that labour inputs and the number of farms has declined. For example, Godden (1997) shows that while the volume of output rose by 2.8 times from 1951-52 to 1991-2, the number of farms declined from 203,000 to 124,000 over the same time period.

One of the major drivers of restructuring in the rural sector has been the declining profitability of agricultural products. While output increased by 2.8 times from 1951-2 to 1991-2, the deflated gross value of output only rose by 6.25% in the same time period, and net deflated output value fell by 82.4% (Godden 1997). Rising costs of inputs have more than compensated for increases in productivity and sales values, forcing massive readjustment in the rural sector. The evidence for this decline is seen in the rundown of many rural townships and the population decline in rural and regional areas.

In common with other post-industrialised countries, Australia has a range of support mechanisms to assist rural industries in the restructuring and contraction process. As a medium size economy that is a major exporter of primary products, Australia does not have the economic base or the leverage to be able to engage in costly price support mechanisms. These have largely been abandoned as mechanisms to cushion downturns in rural industries. As well, there have been reduced emphasis on indirect support mechanisms, such as publicly funded water infrastructure schemes that held water prices artificially low. Instead, more directed support through rural reconstruction and rural adjustment schemes has tended to be used in relation to rural sectors.

Government assistance to the rural industry can be viewed in terms of three main objectives. The first of these is to enhance efficiency, largely through efforts to increase net production. The second is to pursue equity or distributional goals, while the third is to minimise environmental damages. In many instances of government funding, these goals may be offsetting. Increased production may come at the cost of some social impacts and environmental losses, a focus on minimising social losses may have some opportunity costs in terms of production foregone, and so on. Any review of the success of government assistance programs has to be considered in the light of these multiple objectives and complexities.

In this paper, we focus on one particular case study to examine the effectiveness of support funding. The case study is the Queensland beef industry. Paradoxically, the industry has enjoyed high growth rates over the past fifty years, is a major earner of export income to Queensland, but also receives a large share of government Rural Adjustment scheme funding. The reasons for this mixture of growth and financial dependence are reviewed in the following sections of the paper.

2.0 Policy concerns associated with assistance.

The policy issues that the Australian Government has to consider involve both efficiency and equity concerns (Godden 1997). Efficiency questions revolve around whether there are any barriers to the structural adjustment process and the capacity of rural producers to find optimum means of production. There are equity concerns associated with long term structural adjustment goals, mostly associated with whether the actual process of change is deleterious for individual

producers or whether the ultimate structural outcomes accord with the wishes of society. The health of rural townships are a classic example of concerns in the latter case. Economic restructuring and population declines are disastrous for many smaller townships, despite commonly held perceptions that those rural lifestyles should be preserved in Australia.

One result of these concerns has been substantial welfare and infrastructure support for rural and regional areas. Much support comes in the form of cross-subsidisation in essential areas such as postage, power and telecommunication services, the provision of infrastructure such as schools, roads and railways, and support for public sector jobs (eg teachers, police, railways) in rural areas. Other forms of support come in the form of rural-related services, (eg quarantine, government departments), research and development funding (often partly funded by industry) and direct financial support.

Economists rarely rate rural support programs very highly on efficiency grounds. Freebairn (1978) concluded that it was doubtful that there were any efficiency gains available from temporary assistance to industries. At a broader scale, the Industries Assistance Commission (1984) evaluated rural adjustment, and concluded that it was doubtful that the costs of the scheme were outweighed by efficiency gains¹.

Simmons (1993) categorises a number of themes in the political lobbying for rural support over past decades. One of the most consistent has been the theme that agriculture is fundamentally important to the national economy. This argument has lost relevance as the national economy has developed and broadened (and Australians have become better educated about economic issues). Another theme is that the farm sector is 'special' and should be maintained so that its productive capacity is not diminished. These arguments were largely dismissed by Freebairn (1978), when he concluded that events such as drought were unlikely to cause irreparable damage to agricultural infrastructure.

Other arguments have focused more on equity issues than on efficiency grounds. One is that rural producers face 'special' risks with events such as droughts occurring, while another is that the effects of natural disasters have substantial welfare impacts (which are not easily addressed by urban-focused mechanisms such as unemployment benefits). Simmons (1993) notes that the equity grounds for assistance have been assuming more importance compared to efficiency arguments over recent decades.

The efficiency arguments for rural support mechanisms are generally weak. Some, such as the arguments that agriculture is fundamental to the national economy, are clearly wrong. Broad support mechanisms, such as price subsidies, are clearly problematic. The problem in small open economies is that transfers to one particular sector imposes imposts on the taxpayer (or other groups such as consumers), and a deadweight loss on society (Johnson 1995). Although Australia has generally much lower levels of rural assistance than the United States, Japan and members of the European Union, there is little economic case for overall increases in subsidy levels.

Apart from creating deadweight losses on society, rural assistance packages may also be detrimental in that they can reduce the impetus and ability of rural producers to restructure. One important way in which this may occur is through impacts on land prices. Weersink, Clark, Turvey and Sarker (1999) suggest that in Ontario, Canada, government subsidies have had a substantial impact on land prices because these were viewed by the market as a more stable source of income than farm production. Since the mid-1970s, net income from farm production has fallen, and has tended to be augmented with government farm stabilisation packages.

However the flow-on effect of a large increase in land values has consequences of effectively benefiting current asset owners, and disadvantaging future farmers.

In particular, high land values are a major barrier to new potential entrants and those wishing to expand. In Victoria, Madden and Malcolm (1996) note that high prices paid for land (mostly for expansion) are the predominant factor in rural families experiencing financial difficulties. Thus government assistance programs could be expected to have some impact on land prices and create some unanticipated barriers to restructuring.

There is little Australian evidence available about the potential effect of government subsidies on land prices. Most studies (eg Madden and Malcolm 1996) concentrate on valuing land according to net production, ignoring income from other sources. However, there is other substantial evidence from North America that has been reviewed by Weersink et al (1999:425-426):

... Featherstone and Barker (1988) estimated that a move to a more free market scenario from the 1985 farm program would reduce land prices in the United States by about 13% in five years. Veeman, Dong and Veeman (1993) determined that the abolition of direct government transfer payments in Canada would reduce total farm cash receipts by 13%, and consequently lead to a decline in land prices of 5% in the short run and 18.5% in the long run. Just and Miranowski (1993) estimated that government payouts account for approximately 15 to 25% of the capitalised value of land in the United States, but only a small part of their fluctuations.

Apart from possible distortions on land prices, there are at least three other major reasons why economists tend to be suspicious about the efficiency outcomes of rural support programs. One of these is that many support programs appear to create perverse incentives (Simmons 1993). For example, drought aid that focuses on providing short term solutions such as fodder and transport subsidies tends to remove incentives for landholders to plan ahead. The careful farmer who purchases in stocks ahead of time receives no extra financial support, while the one who waits until a drought situation occurs receives the subsidies.

Other incentive structures relate to the declaring of certain regions as being drought declared. For drought subsidies to occur, official drought declared status needs to be given. Substantial political pressure is often levied on the state and commonwealth governments for this purpose (Simmons 1993, Gow 1995). Evidence of this rent-seeking behaviour can be seen from the frequency with which some areas of Australia are declared as being drought stricken, and the variation of that frequency across states. Simmons (1993) notes that between 1964 and 1992, some Queensland shires had been wholly or partially drought declared for more than 70% of that time period.

From an efficiency viewpoint, the occurrence of drought and commodity downturns is a normal and expected part of agriculture in Australia, and thus should be budgeted for in the standard business environment. In an ideal world, farmers would expect regular downturns, and plan accordingly (Godden 1997). In reality, the ability of rural industry to cope with major downturns can be weak. The reasons include factors such as the lumpiness of major investment and debt occurrences, the low rates of capital accumulation (often associated with being in a declining industry), time lags in factor adjustments such as land prices, and the unpredictable nature of downturns. The latter is particularly relevant when natural disaster events coincide with commodity downturns, or when the number of natural disasters is higher in a given time frame.

The second major problem with many rural assistance measures, particularly those that focus on short-term solutions, is that they essentially transfer the risk of agricultural production from the producer to the government. For example, if the rural sector is confident that the government will provide fodder subsidies in the event of a drought, there is reduced incentive to hold fodder stocks in advance. There are also reduced incentives to conserve fodder stocks in paddocks (particularly in times of decreasing returns). The outcome is that landholders can take more risks because a government focused on short term relief measures will be likely to subsidise fodder purchases, buy replacement stock and so on.

In the policy arena, a focus on short term issues and solutions tends to be confounded with industry restructuring pressures. If rural assistance measures simply mean that governments take over the risk for natural disasters, one outcome is that the pressure for restructuring activities tends to be reduced. Many commentators (eg Gow 1995) have criticised the focus on drought as a natural disaster (and the reason for recurrent funding support) when drought is an integral part of ecosystem functioning in Australia.

The third major problem with rural assistance packages is that they sometimes cause negative tradeoffs with environmental factors (Conacher and Conacher 1995, Godden 1997, Lewandrowski, Tobey and Cook 1997). At one level, this occurs because efforts to improve productivity often involve consequential environmental losses (Lewandrowski et al 1997). One example in Queensland would be where attempts to increase productivity and viability occurred by clearing vegetation to improve pasture production (eg the Brigalow scheme of the 1960s and 1970s where clearing was often a condition of the lease).

At another level, environmental losses can result more directly from rural assistance packages. An example would be land degradation in the Burdekin shire in northern Queensland in the 1980s. At that time the introduction of Brahman cattle and new supplementary feeding methods meant producers tended to feed cattle at home rather than sell or agist them (Landsberg, Ash, Shepherd and McKeon 1998, White 1997). The structure of drought assistance measures at that time provided additional incentives. The result was increased land degradation and a re-evaluation of management and policy options (Landsberg et al 1998).

Given these past and potential problems of rural assistance packages, it is not surprising that economists have been less than favourable about their success in meeting efficiency outcomes. However, most commentators do place more weight on the equity outcomes of such assistance measures (in comparison to efficiency outcomes).

Gow (1995) explains the basic case by suggesting that many rural people have strong ties to their land and lifestyle and ignore financial incentives for shifting and change that would generally be successful in other industries. The result is that many rural people will accept much lower standards of living in the downturn phases than other Australians might accept, warranting a special approach to rural industries.

Godden (1997) makes a similar argument, suggesting that the human dimension of restructuring in agriculture cannot be ignored. He suggests that there are even efficiency grounds for moves to alleviate rural poverty on the basis that it may avoid intergenerational problems in areas of health, education and interpersonal relationships. Simmons (1993) argues that the political reality is that Australians view the welfare of farm families during economic downturns (drought) as important. A political market approach is to accept that goal is given, and within that constraint, search for the most efficient ways of achieving the end result.

Despite these broad arguments, there has been little work done by economists to examine the relationships between structural change in agriculture and the rest of the economy (Godden 1997). For example, there appears to be widespread support from the Australian public for farm families and rural townships, but little evaluation of where the limits lie to such support. As well, there has been little evaluation of how support should be distributed. For example, Gow (1995) challenges that it is inequitable for business support mechanisms to be focused on farms rather than on businesses in small townships.

Some indications about the concerns that the wider community has for preserving small townships and rural areas comes from a number of choice modelling studies that have included social tradeoffs along with environmental factors. In the results of one non-market valuation study, Blamey et al (1999) reported relatively high preservation values for rural jobs and regional income in the Desert Uplands region of central-western Queensland. The results of the study were that Brisbane residents were prepared to pay an additional \$3.05 in taxes for each extra job preserved and an additional \$5.60 for each extra \$1 million in regional income maintained in the bioregion. Similar results (but lower values) were reported by Morrison (1998) who found that Sydney residents had positive values for preserving jobs in the Gywdir and Macquarie valleys in NSW. The estimates of value per job preserved were 21.8 cents and 10.7 cents respectively.

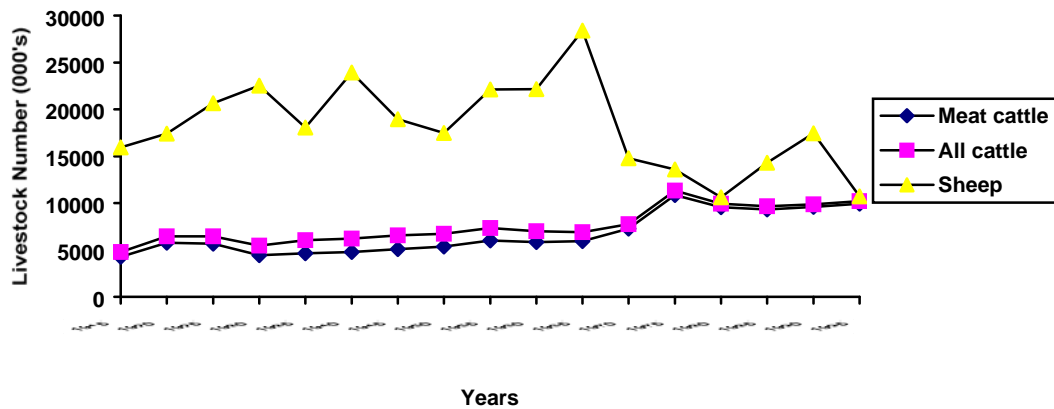
The conclusions to be drawn are that equity concerns are becoming more important as the basic goal underpinning rural assistance measures, but that there are some forms of rural assistance that have perverse outcomes. There may be tradeoffs between short-term goals and longer-term restructuring outcomes, and between rural assistance generally and environmental factors. It is also unclear where the balance between equity outcomes and other factors should be set. The development of rural assistance measures in response to these challenges is reviewed briefly in section four of this paper. First though, the beef industry in Queensland is examined in more detail to gain some appreciation of restructuring needs.

3.0 Structure of the beef industry in Queensland

Over 40% of Australia's beef herd is located in Queensland. The focus of the beef industry in Queensland is primarily on export markets, and approximately 80% of product is exported to countries such as Japan, the United States, South Korea and Taiwan. In contrast, the focus of production in southern states tends to be on the domestic market, which accounts for approximately half of the national production.

Cattle numbers have increased dramatically in Queensland since 1965 (see Figure 1). This is for a number of reasons, including the growth in export markets, the enhanced profitability of beef relative to the wool and dairy industries, the development of improved pastures (particularly associated with the Brigalow scheme, and the introduction of more drought tolerant Bos Indicus cattle to northern Australia.

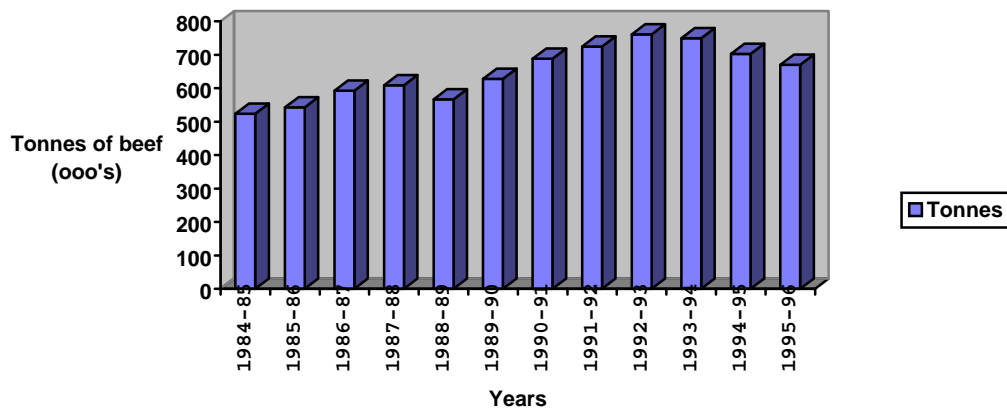
Figure 1. Numbers of beef cattle, all cattle and sheep in Queensland over time.



Source: Queensland Government Statistician's Office.

These data on cattle numbers do not properly reflect the possibility that production per beast may have risen significantly. Some indication of the overall trend can be given by examining the tonnages of beef produced in the state over time. These are shown below in Figure 2, and indicate that tonnages produced over time have tended to trend slowly upwards, even in times when cattle numbers fell. (Note though that the drought years of the early 1990s and the growth of the live export markets may be artificially depressing that growth trend.)

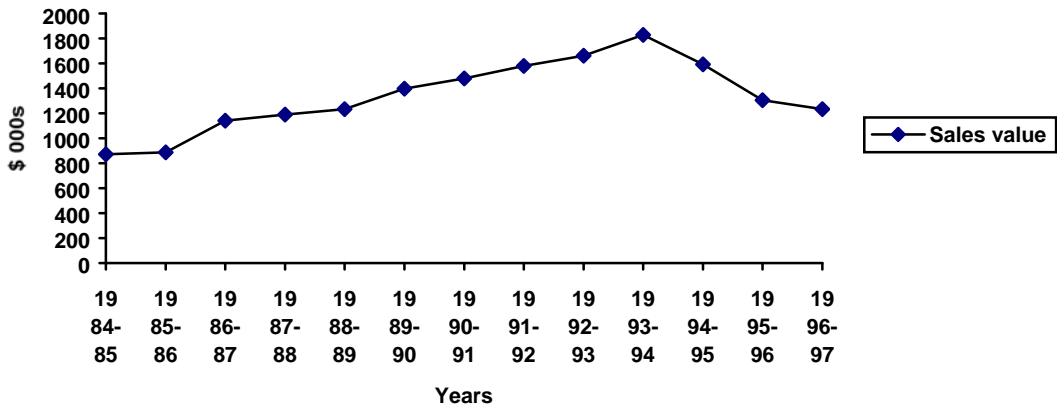
Figure 2. Tonnages of beef produced in Queensland over time.



Source: ABS data reported in Queensland Yearbooks.

The increases in meat production are through factors such as pasture improvement, improved breeding, feedlotting and supplementary feeding. It is possible that not only have there been improvements in the amount of meat being produced, but also that the quality of that production has improved. Some indication of this can be gained from examining the Australian Bureau of Statistics data on the sales of livestock in Queensland. The results indicate that there is a general trend upwards in the value of production (which would be partly explained by increases in commodity prices and lot feeding), but this could fluctuate over time.

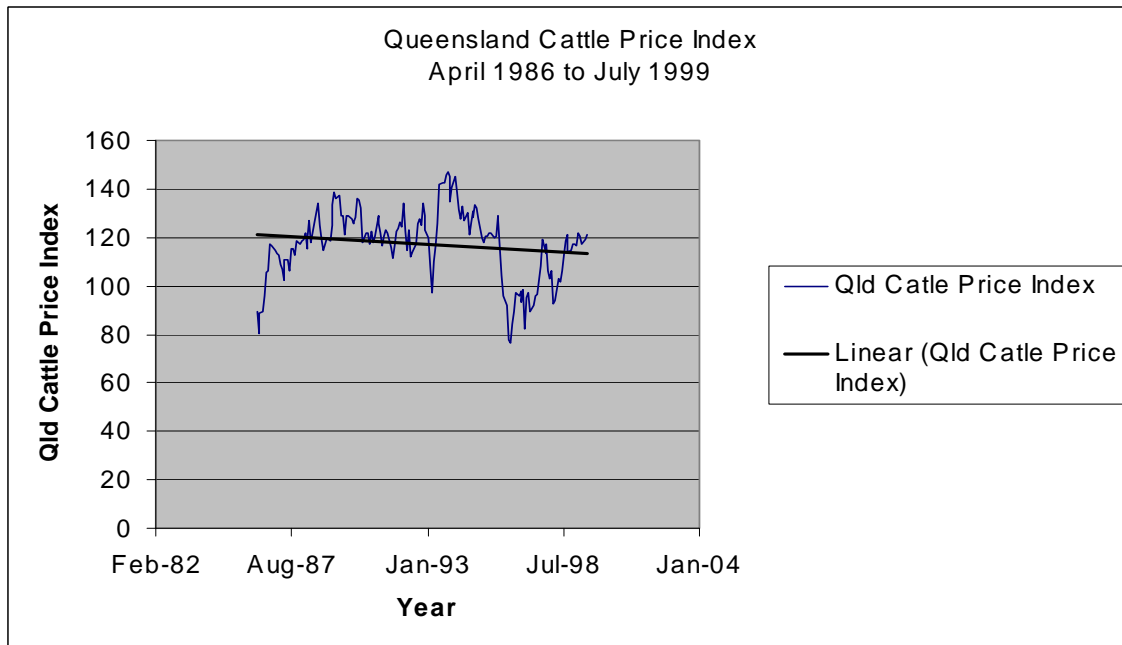
Figure 3. Value of sales of cattle and calves in Queensland



Source: Australian Bureau of Statistics

The downturn in commodity prices in 1995 and 1996 has depressed returns in the industry, and the influence of this can be seen from the Queensland Cattle Market Index between 1986 and 1999.

Figure 4. Queensland Cattle Market Index.

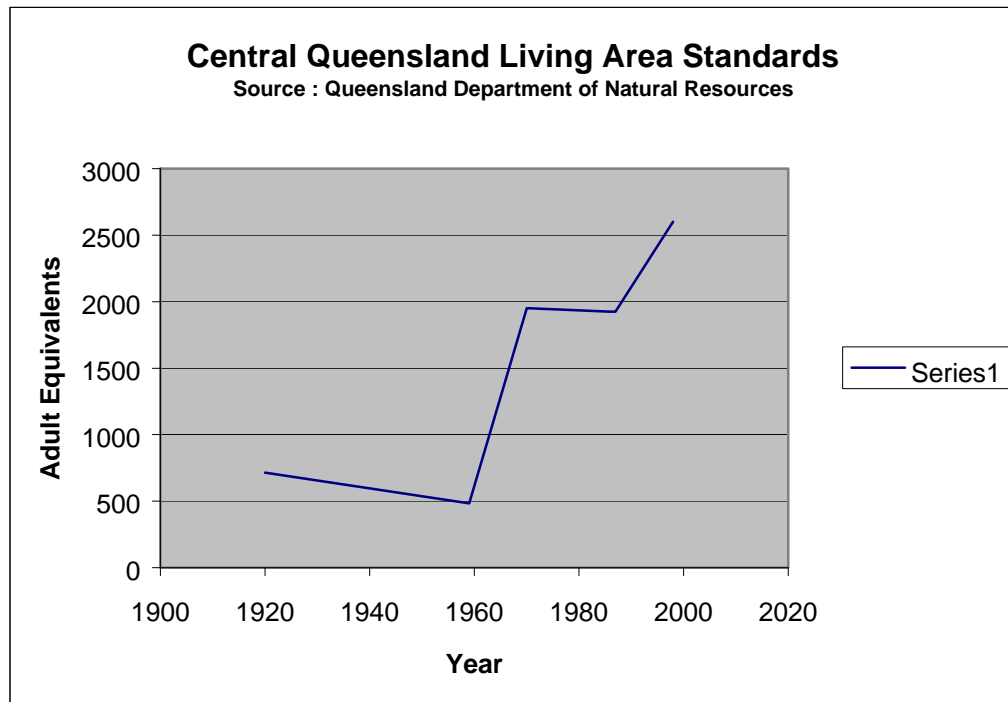


In summary, this data provides some basic evidence that the beef industry in Queensland has grown substantially over past decades, particularly in relation to the tonnages and value of meat produced. Like many agricultural commodities, supply patterns in the beef industry do follow cyclical trends (Rolfe and Reynolds 1999), but the downturns in the mid-1990s have been primarily caused by drought conditions and market fluctuations.

At the same time that the beef industry has been exposed to short term fluctuations in commodity markets and weather conditions, it has also undergone substantial restructuring. One driver of this restructuring has been to increase the size of a production enterprise needed to maintain

viability. Some evidence of this can be gained from looking at the historical assessments of the Department of Natural Resources in Queensland concerning viable beef enterprise sizes in areas of Central Queensland.

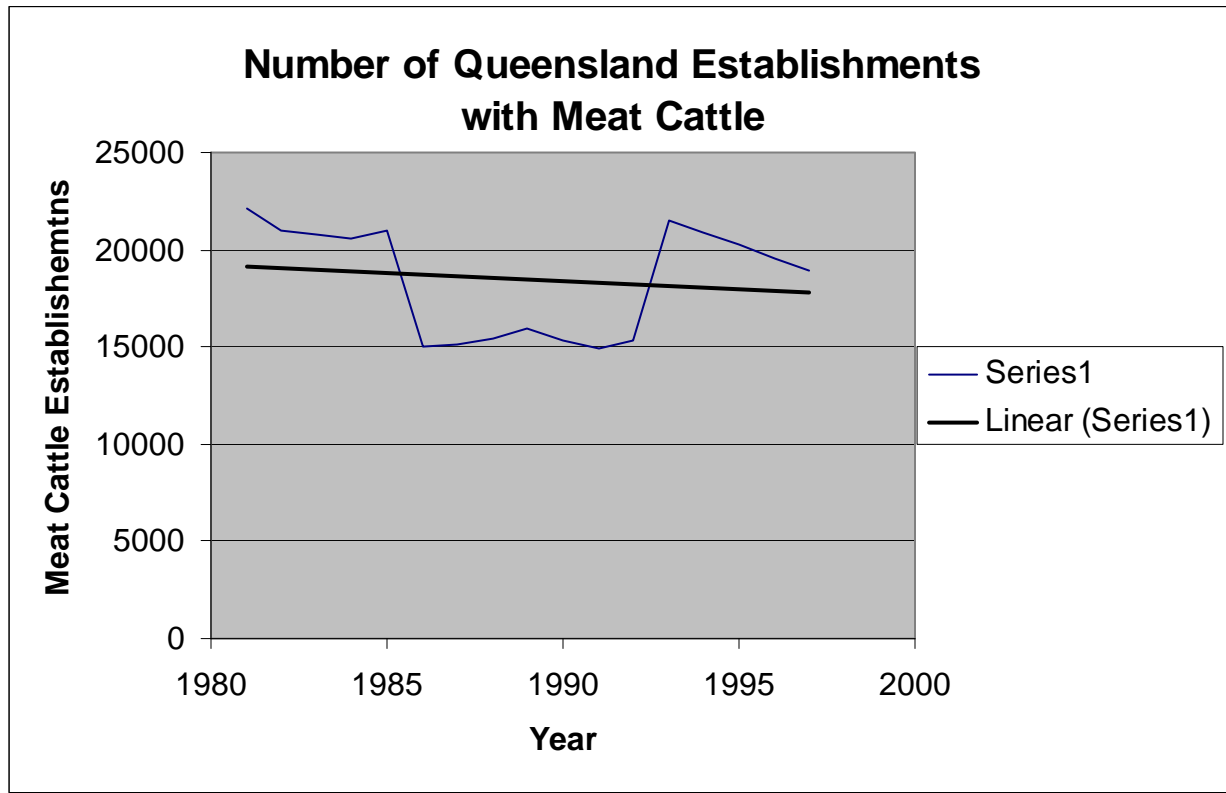
Figure 5. Central Queensland Living Area Standards²



The data shows that there has been a substantial increase in the size of the cattle herd needed to maintain a living area. In some areas these increases have been gained by pasture improvement. However, as the data in Figure 1 indicates, the effects of pasture improvement on overall cattle numbers has not been substantial in the past twenty years. This indicates that property rationalisation and amalgamation is a primary means of maintaining viability through increasing cattle numbers per operation.

The beef industry is little different to other commodity industries in Australia that have been characterised by the substitution of capital for labour and a diminishing number of operators. The evidence for this restructuring can be shown in a number of ways. The total number of specialist beef enterprises has fallen over time, as shown in Figure 6.

Figure 6. Number of Queensland Establishments with Beef Cattle.



Nationally, the number of specialist beef properties fell from 20,766 to 16,400 between the 1996-7 and the 1997-8 years. The number of non-specialist properties in Australia carrying beef cattle was estimated by ABARE at 20,7335 in 1996-97, and 23,300 in 1997-8, indicating that there has been some diversification out of beef. This is not surprising in light of the market conditions in that time period. In the 1997-8 period, there were about 6232 specialist beef properties in Queensland, accounting for approximately 58% of the national herd (excluding major feedlots) (ABARE 1999).

As well as a fall in the number of production enterprises, there has also been a diminished use of labour in rural industries generally. Perhaps the most visible aspects of this in the beef industry has been the replacement of droving teams with trucks, and the use of helicopters instead of horsemen for mustering purposes. The declines in labour components and overall profitability has had substantial flow-on effects in regional areas, ultimately reflected in population losses. Many western shires in Queensland that are heavily reliant on the pastoral industries continue to suffer population declines. The south-western region of Queensland lost 11% of its population between 1991 and 1998, while the Central-West region lost 6.7% over the same time period (Queensland Government Statistician 1999). Most of the rural shires in other parts of Queensland have also lost population, and in some (Burke, Flinders, Taroom) the average annual lost has exceeded 2.5% during the 1990s (Queensland Government Statistician 1999).

Other evidence of structural pressures for change comes from an analysis of debt levels in the beef industry. QRAA (1999A) estimated that in 1998, 19,764 farm businesses in Queensland shared a total of \$5.28 billion in borrowings. More than one-quarter of borrowers were from the beef industry (26.1%), and held 28.3% of total debt. The average debt held by beef enterprises

borrowing money in 1998 was \$290,000. More critically, 36.5% of rural debt classified as "non-performing" was held by the beef industry.

Income and financial performance figures are available from ABARE data. Table 1 shows that the beef industry generally is characterised by low profitability.

Table 1. Selected Farm Performance Estimates.

Item	1992-93 to 1996-97 (5 year average)	1997-98	1998-99
	\$	\$	\$
Receipts - beef cattle	120,461	105,928	105,727
Receipts – Govt assistance	1,842	1,333	647
Receipts – other			
Total Receipts	148,050	139,871	143,388
Total Cash Costs	121,700	117,260	112,595
Farm Cash Income	26,350	22,611	30,794
Buildup in trading stocks	1,235	6,979	11,842
Depreciation	14,534	14,846	14,423
Imputed labour cost	30,956	32,979	32,684
Farm Business Profit	-17,905	-18,053	-4,471
Rate of return (%)	-0.3	-0.5	0.5

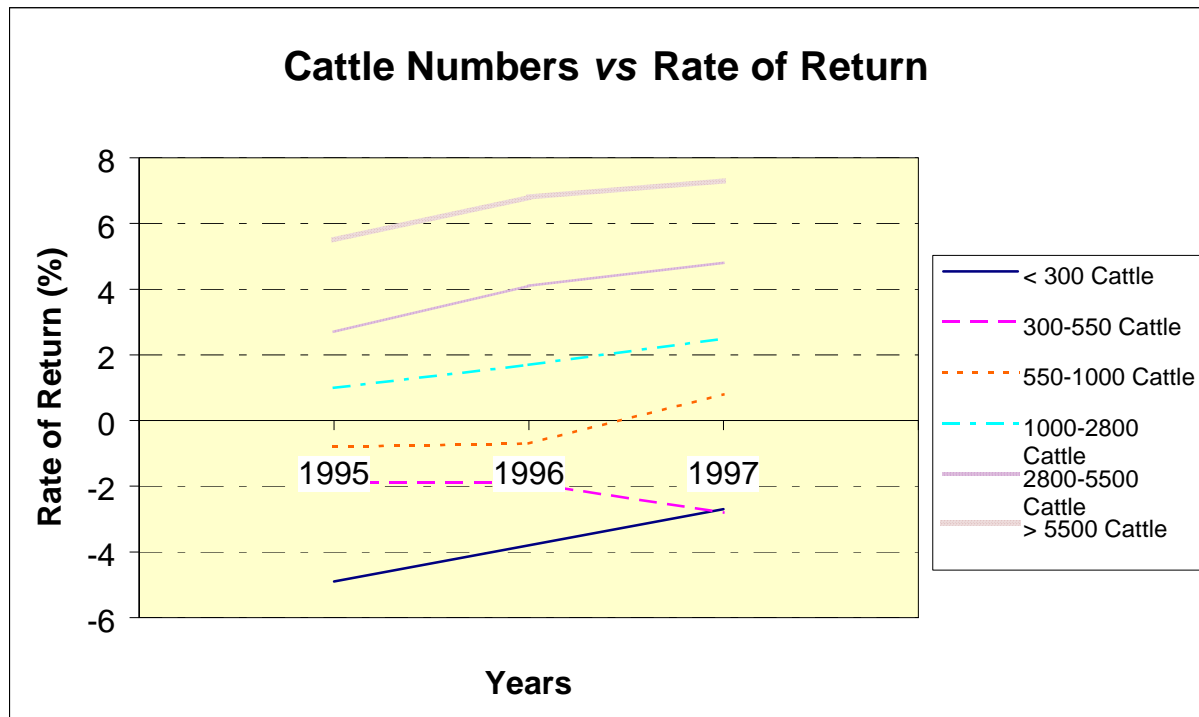
Source: ABARE (1999).

Farm cash incomes have varied substantially in recent years. ABARE (1998, 1999) reports that when adjusted to 1997-98 dollar values, cash incomes in the three years between 1992-3 and 1994-5 was \$33,683. In 1995-6 it fell to \$14,600 per enterprise, and rose slightly to \$16,100 the following year. It rose again to \$22,600 in 1997-8, and to \$30,800 in 1998-9. Because of current high prices, it should rise again in the 1999-2000 year. The consequence of improving cash incomes has been a fall in the percentage of specialist beef properties recording farm business losses - down from 82% in the 1997-8 year to 74% in the 1998-9 year.

This summary though hides substantial variation in incomes and net profit. ABARE (1999) notes that the smaller beef operations generally had lower rates of return. In general, the lower performing beef properties were located in south-east of Australia, as well as some in the far west of western Australia, in Cape York in Queensland, and in the top end of the Northern Territory. ABARE (1999) classifies much of the beef producing region of Queensland as being profitable.

This broad relationship between size and profitability can be seen from the ABARE (1999) data on financial performance by herd size in the Queensland beef industry.

Figure 7. Rates of Return by Establishment Herd Size in Queensland.



Source: ABARE (1998, 1999).

The implications of the ABARE data becomes clearer when the numbers of beef producers in each group are considered. This is reported in Table 2. If the 1000 head is taken as a minimum herd size for profitability, then two thirds of beef producers fall below this level. If the herd sizes advocated by the Queensland Department of Natural Resources are used (Figure 5), the proportion of unviable producers is much larger. Note that there is some evidence of restructuring already occurring, with falls in the number of producers with less than 300 head of cattle, and increases in all other categories.

Table 2. Queensland Specialist Beef Producers by Herd Size.

Herd Size	Number of producers in 1997-98	Number of Producers in 1998-99
Less than 300 cattle	2,415	2,032
300 to 550 cattle	1,154	1,304
550 to 1000 cattle	787	804
1000 to 2800 cattle	1,131	1,262
2800 to 5500 cattle	429	438
More than 5500 cattle	250	325

Three broad conclusions can be drawn from this examination of the beef industry in Queensland. The first is that despite its relative success in capturing export markets and increasing the overall value of production, the industry has also been exposed to large restructuring pressures. The bulk of properties fall below rough threshold definitions of viability. The proportion of non-performing debt held by the industry indicates that pressure for restructuring remains intense

within the industry. The second conclusion is that industry income variations can be substantial, with corresponding implications on the viability of different enterprises. The third conclusion is that viability is largely a factor of the scale of production, with smaller production units feeling the brunt of restructuring pressures.

4.0 Rural Adjustment and the Queensland Rural Adjustment Authority.

In Australia, rural adjustment is administered by a joint agreement between the Commonwealth and the States under the *Rural Adjustment Act 1992*, which replaced earlier adjustment schemes. Approximately 90% of funding is sourced from the Commonwealth (apart from exceptional circumstance cases), and is distributed at the state level (Godden 1997). In Queensland, the distribution body is the Queensland Rural Adjustment Authority.

There have been a number of changes to the way that rural adjustment funding has operated over the past decade. In 1990, the Commonwealth removed drought from the umbrella of National Disaster Relief Arrangements in an effort to focus funding on longer term solutions. The National Drought Policy that was established in 1992 was focused on encouraging rural Australia to adopt self-reliant approaches for managing climate variations (Godden 1997). The rationale for such an approach was that it would allow policy to be focused more on sustainability outcomes, and reduce the transfer of risk from the rural sector to the Government (Simmons 1993).

The elements of a longer term drought strategy included research and development components, a communication strategy, and education and training objectives, with the latter to be expanded through Landcare. As well, the refocusing of rural adjustment in the early 1990s saw more distinction between efficiency goals and welfare elements (Simmons 1993).

The commodity and drought cycles of the mid-1990s have been a good test of how effective the direction changes in policy have been. Rural industries have often been critical of the Rural Adjustment Scheme (RAS) on a number of grounds. Godden (1997:257) summarises some of the main concerns as:

- the scheme was not applied uniformly across Australia;
- Commonwealth funding was too low and falling;
- farmers whom it was intended to assist were not obtaining assistance;
- much of the assistance was related to additional debt where the principal problem was high debt levels exacerbated by high interest rates in the late 1980s and early 1990s;
- there were inequities in obtaining assistance to leave farming;
- exceptional circumstances provisions were too difficult to access, and not available equitably;
- farm household support was a total failure, and
- states were not doing a sufficiently good job of promoting and administering the scheme.

The drought years of 1993-4 saw some relaxation of the longer term goals of the national drought strategy (Gow 1995). Drought was declared an exceptional circumstance in 1994, and a drought assistance package worth \$170 million over two years was funded by the Commonwealth. In general though, the broad aims of the 1992 RAS scheme have remained reasonably consistent. They include:

- providing support through grants to subsidise interest on loans,
- grants for farm training and developing business skills,
- grants to assist non-viable farmers to leave the industry, and

- grants to assist farmers facing exceptional circumstances.

In Queensland, the QRAA administers these functions of the RAS scheme in a number of ways. In 1998-99, the principal funding outcomes of QRAA were:

- \$32 million advanced in concessional loan funds to assist recovery from natural disasters and to enhance farm businesses,
- \$6 million in interest subsidies to improve productivity,
- \$9 million in interest subsidies for drought relief purposes,
- \$1.6 million provided for training grants (QRAA 1999).

Major support patterns over the past five years are summarised in table 3 below.

Table 3. Support by QRAA to different programs.

Support Given (\$ 000s)	1998/99	1997/98	1996/97	1995/96	1994/95
Primary Industry Productivity Enhancement Scheme	23,327	15,758	9,229	5,604	6,735
National Disaster Relief Assistance	7,442	1,087	213	603	170
Water Infrastructure Incentive Scheme	935	136	-	-	-
Drought Crop Loan	66	224	40	375	61
Drought Restocking Loan	254	1,160	563	81	295
Small Business Grant	23	-	-	-	-
RAS 1992 – farm productivity	5,515	12,697	13,118	9,912	10,275
RAS 1992 - drought	8,510	15,134	29,045	41,158	46,112
RAS 1988 – interest subsidy	213	532	1,490	2,363	5,588
Training – individual grants	604	1,202	592	269	131
Training – group grants	936	2,457	894	-	-
Training – professional advice	330	739	578	421	84
South-West Strategy					
– farm productivity	807	607	496	N/A	N/A
– title amalgamation	19	-	-	-	-
- skills and professional advice	14	44	18	4	-
- re-establishment support	325	225	221	75	-
Qld Tobacco Assistance Package	4,675	9,074	-	-	-
Desert Uplands Scheme	27	-	-	-	-
Total Support	54,022	61,076	56,497	60,865	69,451

Source: QRAA (1999a).

Particular support by QRAA for the beef cattle and meat cattle/sheep industries has been summarised in more detail by QRAA in Table 4 below:

Table 4. QRAA Support to the Beef Cattle and Meat Cattle/Sheep Industries.

Year	Concessional Loans		Grants	
	Number of Approvals	Amount \$M	Number of Approvals	Amount \$M
1994/95	18	1.905	1,249	24.341
1995/96	23	1.676	1,267	23.514
1996/97	32	2.433	1,929	23.433
1997/98	58	6.898	2,348	16.436
1998/99	59	10.382	1,103	7.581

Source: Tony Ford, QRAA.

Several conclusions can be drawn from this detailed breakup. First, the importance of QRAA funding to the beef industry has fallen. In 1994/95 approximately 35% of QRAA funding was directed to the beef and sheep industries, and by 1998/99, this had fallen to 14%. Second, a large number of beef producers (approximately one-quarter) have been accessing grant funding (mainly for drought relief purposes). Third, there has been a strong trend in funding to the cattle and sheep industries away from grant funding towards concessional loans.

5.0 Evaluating the performance of QRAA.

There are two major issues to consider in evaluating the performance of the QRAA in recent years. The first of these is whether support is focused on short term considerations, or focused on longer term sustainability issues. A focus on short-term considerations may relieve the problem of the day, but do little to address major restructuring issues. The second issue to consider is whether support simply delays restructuring activities. This might occur because landholders have access to increased debt options. In the case of support being extensive enough to influence land markets it might also occur because of 'drag' effect on other more efficient producers. If support programs hold land prices artificially high, then it will reduce or delay the ability of more efficient producers to make structural adjustments by increasing property sizes.

Short term focus, or long term restructuring?

The data on the beef industry showed that it was a successful, expanding industry that still had a substantial number of producers operating below a minimum viable size. Determining how QRAA is dealing with these problems will be a major indication of its relative success.

Examination of expenditure trends by QRAA indicates a broad trend away from direct interest subsidies and other short term assistance measures in favour of loans and longer term restructuring packages. This shift has occurred for a number of reasons, including the return to better seasons in Queensland and the winding up of RAS 1988 and RAS 1992. In 1998-9, the bulk of QRAA funding occurred through Primary Industry Productivity Enhancement Schemes (PIPES), which offer low interest loans at terms of up to twenty years for the purpose of improving profitability and productivity.

The evidence about spending on training and skill enhancement programs as an indicator of long term restructuring is mixed. While expenditure in 1998-9 at \$1.87 million is high compared to

the mid 1990s (eg \$0.2 million in 1994-5), it is substantially lower than in 1997-8 when expenditure was \$4.4 million.

In contrast, spending in particular strategy areas (such as south-western Queensland) is higher. The aim of these strategies is to focus support programs at a regional or industry level in areas where particular needs exist. A total of \$8.7 million has already been committed to the first phase of the South-West strategy (concentrated on the mulga lands), which looks likely to continue into a second phase (QRAA 1999). However, it is not clear that the original aims of encouraging property buildup have been particularly successful. In the five years from 1995-6 to 1998-9, only 12 property owners received establishment support (total of \$845,000) to leave the land for another industry. By comparison, \$2.14 million has been paid in grants or loans to enhance production or assist in property purchase options. In the latter case, this support is likely to have had a positive effect on the land market, hindering other incentives for restructuring in the area.

Overall, the evidence indicates that QRAA is focusing more strongly on enhancing production and profitability than simply responding to short term demands. The winding down of the RAS 1992 scheme indicates that this is a substantial shift in the focus of QRAA. This is to be welcomed, as successful structural adjustment will be important to the beef industry.

What is more uncertain is how well QRAA can integrate a focus on sustainability with the interests of other government departments. In terms of sustaining the resource base, there are clearly strong overlaps with the Department of Natural Resources and the Environment Protection Agency. In terms of maximising long term agricultural potential, there would be substantial overlaps with the functions of the Queensland Department of Primary Industries. Thus while increased emphasis on longer-term restructuring issues is to be welcomed as an efficient application of resources, it is also likely to increase the needs for coordination between QRAA and other government agencies.

Do support mechanisms simply delay restructuring processes?

QRAA does not appear to have been particularly successful at encouraging rural people to leave their industry, as there has been only a low level of spending on re-establishment support (apart from the Tobacco Assistance Package). While funding support in periods of cash flow crisis may have allowed some rural families to avoid from being forced to sell (and create major downturns in the property markets), there are also few reasons to suggest that QRAA funding creates major distortions on restructuring choices.

One possible distortion is where rural support programs flow through into property markets, hence making restructuring options more expensive for other rural families. One way of examining the likelihood of this in Queensland is to look at the overall level of rural support relative to productive incomes. ABARE (1999) indicate that government assistance to specialist beef properties is approximately 1.25% of total property receipts, although this proportion is as high as 6% for small operators running between 300 and 550 cattle

Similar estimates can be generated for QRAA data. In 1998-9, QRAA provided approximately \$52.7 million in assistance to rural industries (QRAA 1999a). This can be compared to both total rural debt (\$5,285 million in 1998-9) and the gross value of production (\$5,677 million in 1997-8) (QRAA 1999b). Assistance to rural industries in Queensland from QRAA³ in 1998-9 was approximately 1% of rural debt and 0.9% of the gross value of production. At these levels, assistance is unlikely to be high enough to be a major distortion on property markets, although support in particular areas and industries may influence local property markets.

Another avenue for considering whether the activities of QRAA might delay restructuring activities is the examination of debt levels over time in particular industries. These estimates are provided in Table 5. If rural assistance was substantial enough to different sectors of the rural economy, it would be expected that rural debt would not necessarily decline. However, the evidence from Table 5 indicates that fundamental prospects for rural industries are major drivers of debt levels. Debt levels in the sheep/wool industry have reduced consistently over the five year period in line with expectations about declining prospects. The cotton industry has exhibited the opposite behaviour, and prospects for growth have been matched with increased debt levels. The beef industry has increased debt levels in the 1996 and 1997 years, consistent with an industry that is struggling for short-term cash flow but has good longer term prospects.

Table 5. Rural Debt by Industry in Queensland.

Value (\$ million)	1998	1997	1996	1995	1994
Beef	1,496	1,672	1,735	1,422	1,428
Cotton	416	234	186	153	131
Dairy	263	256	212	213	192
Grain	377	364	351	213	286
Grain/grazing	505	397	599	553	466
Horticulture – trees	226	256	219	194	162
Horticulture – vegetables	200	123	108	87	83
Intensive livestock	252	119	111	116	130
Other	527	361	283	207	139
Sheep/Wool	187	212	251	351	321
Sugar	831	825	663	555	512
Tobacco	4	7	5	4	23
Total	5,285	4,826	4,723	4,069	3,874

Source: QRAA (1999b)

The conclusions to be drawn are that, at a broad analysis level, there does not appear to be much evidence that support mechanisms are delaying restructuring processes.

6.0 Conclusions

Assistance to rural industries has been commonplace in Australia, although for a variety of reasons. Although the productivity of the rural sector increases, returns continue to fall as the relative importance of the sector contracts. Rural assistance measures have been employed by Australian governments to address the welfare and equity concerns that arise as a consequence. In Queensland, most funding for rural assistance is channelled through the Queensland Rural Adjustment Authority.

There are three broad objectives to rural assistance. The first of these are to enhance efficiency, usually through measures to increase productivity and the viable size of enterprises. The second goal is to achieve a minimum standard of welfare for rural families and communities, while the third is to minimise environmental problems that might be associated with rural poverty and assistance measures.

The beef industry in Queensland has been examined to establish a basic case for rural assistance. This is a successful export-based industry that has achieved solid growth over past decades.

Despite this success, substantial pressures to restructure exist. Approximately two-thirds of specialist beef enterprises have zero or negative net returns, and a larger proportion fall below minimum viable operating size. The industry holds 28% of rural debt in Queensland, and about one-third of non-performing debt. In recent years, drought and market fluctuations have depressed returns.

Assistance through QRAA to rural industries in Queensland has ranged between \$54 million and \$69 million per annum over the past five years. Although substantial, there is little evidence that this level of spending is distorting factor markets and causing unintended flow-on effects. Financial support is approximately 1% of total rural debt and 0.9% of the gross value of rural production.

There is evidence that QRAA is moving from a short-term relief focus to a longer-term focus on restructuring and viability issues. Given the future pressures on the beef industry in this regard, this change in focus is to be welcomed. The challenges for QRAA will be to integrate a longer term perspective on economic and environmental sustainability with the goals and activities of other agencies, as well as to evaluate the overall effectiveness of its funding programs.

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References.

ABARE 1998 *The Australian Beef Industry 1998*, ABARE Research Report 98.7, Canberra.

ABARE 1999 *The Australian Beef Industry 1999*, ABARE Research Report 99.10, Canberra.

Blamey, R.K, Rolfe, J.C. and Bennett, J.W. 1999 "Valuing remnant vegetation using Choice Modelling: An application to the Desert Uplands of Central Queensland", paper presented to the 43rd Annual Conference of the Australian Agricultural and Resource Economics Society, Christchurch NZ, January 1999.

Conacher, A. and Conacher, J. 1995 *Rural Land Degradation in Australia*, Oxford University Press, Melbourne.

Featherstone, A.M. and Baker, T.G. 1988 "Effects of reduced price and income supports on farmland rent and value", *North Central Journal of Agricultural Economics*, 10(1):177-190.

Freebairn, J.W. 1978 "Pros and cons of temporary industry assistance", *Australian Journal of Agricultural Economics*, 22(3):194-205.

Godden, D. 1997 *Agricultural and Resource Policy: Principles and Practice*, Oxford University Press, Melbourne.

Gow, J. 1995 "Drought, Lies and Videotape", *Policy*, 10(4):7-11 (Summer 1994-95).

Johnson, R.W. 1995 "Modelling Government Processes and Policies in Agriculture: A Review", *Review of Marketing and Agricultural Economics*, 63(3):383-393.

Just, R.E. and Miranowski, J.A. 1993 "Understanding farmland price changes", *American Journal of Agricultural Economics*, 75(1):156-168.

Land Settlement Advisory Commission (LSAC) 1959 : "The Report on Progressive Land Settlement in Queensland", Brisbane.

Landsberg, R.G., Ash, A.J., Shepherd, R.K. and McKeon, G.M. 1998 "Learning from history to survive in the future: management evolution on Trafalgar Station, north-east Queensland", *The Rangeland Journal*, 20(1):104-118.

Lewandrowski, J., Tobey, J. and Cook, Z. 1997 "The interface between agricultural assistance and the environment: chemical fertilizer consumption and area expansion", *Land Economics*, 73(3):404-427.

Madden, B.J. and Malcolm, L.R. 1996 "Deciding on the worth of agricultural land", *Review of Marketing and Agricultural Economics*, 64(2):154-163.

Morrison, M.D, Bennett, J.W., Blamey, R.K. and Louviere, J.J. 1998 *Choice Modelling and Tests of Benefit Transfer*, Choice Modelling Research Report No 8, University College, The University of New South Wales, Canberra.

Queensland Department of Natural Resources (QDNR) 1998 *The Handbook of Land Planning Guidelines, Living Area Standards*, Brisbane.

Queensland Department of Lands (QDOL) 1990 *The report of a Review of Land Policy and Administration in Queensland*, Brisbane.

Queensland Rural Adjustment Authority (QRAA) 1999a *Annual Report*, Brisbane.

Queensland Rural Adjustment Authority (QRAA) 1999b *Rural Debt in Queensland: RDQ 1998 Survey*, Report prepared for QRAA by Hart Larwill, Brisbane.

Simmons, P. 1993 "Recent Developments in Commonwealth Drought Policy", *Review of Marketing and Agricultural Economics*, 61(3):443-454.

Veeman, M.M., Dong, X.Y. and Veeman, T.S. "Price behaviour of Canadian farmland", *Canadian Journal of Agricultural Economics*, 41(2):197-208.

Weersink, A., Clark, S., Turvey, C.G., and Sarker, R. 1999 "The effect of agricultural policy on farmland values", *Land Economics*, 75(3):425-439.

¹ Quoted from Godden (1997)

² Data compiled from LSAC (1959), QDOL (1990) and QDNR (1998). Early data was for grazing properties in the old Land Agent Districts of Clermont and Springsure, while the later data was from the local Government Areas of Belyando, Peak Downs, Emerald and Bauhinia. Data compiled pre 1970 expressed Living Area Standards in dry sheep equivalents. These were converted to cattle adult equivalents (450 kg steer on maintenance) by a factor of 1 beast to 8 drysheep equivalents.

³ This is not the only form of assistance available. There is also access to social security mechanisms and particular support mechanisms such as education support.