# Department of Primary Industries, Parks, Water and Environment, Tasmania

# Submission to the Senate Select Committee Inquiry into Food Production in Australia

#### October 2009

#### Preface

This submission has been prepared at a late stage in the Committee's deliberations, and the Department is conscious of the substantial and very useful submissions that have been made by a wide range of stakeholders. It is not intended, therefore, to repeat many of the broader points made already by others, such as the background information well summarised by the Australian Government's Department of Agriculture, Fisheries and Forestry. The focus will be on certain key themes affecting Tasmania, and the provision of selected, more detailed information to inform the Committee.

# The Department of Primary Industries, Parks, Water and Environment (DPIPWE)

This Department was formed only in July 2009, but it reflects a return to a previous structure (1998-2002 and in part, to 2006). It represents a broad-spectrum natural resource management agency, responsible for (among other things), agricultural policy, biosecurity, water management, the conservation of natural values, environmental regulation, and the management of Tasmania's very large reserved land estate.

The Department has also pioneered an approach to research, development and extension (RD&E) that operates through a partnership with the University of Tasmania. In agriculture, this is through the mechanism of the Tasmanian Institute of Agricultural Research (TIAR). TIAR has provided a submission (No. 62) that explains this approach, and contains also some valuable observations that address the Committee's terms of reference.

DPIPWE is thus in a position to provide a perspective that draws on many relevant strands of policy and administration, on behalf of the Tasmanian Government.

#### The Place of Agriculture in Tasmania

Agriculture is a major driver of the Tasmanian economy in terms of both farm production and value adding processing, post farm gate.

National accounts data confirms agriculture is more important to the Tasmanian economy than to that of any other State. It accounted for 4.6% of Gross State Product in 2007-08, which is twice the contribution agriculture made at the national level. This in fact greatly understates its true impact, as the flow-on effects of both agriculture itself and the large processing industries that it supplies are much larger.

The place of agriculture in the State is more important even than its economic value suggests. The State has a small and very decentralized population. For those in the State's many small towns, agriculture is central to their local economy and society, as it is elsewhere in rural Australia. But even in the cities, people live within a few minutes of rural land, and the disjunction between urban and rural lifestyles, so evident in large mainland cities, is almost wholly absent. Tasmanians know and care about the State's farming sector to a quite unusual extent.

Tasmania already has a large net food surplus, with almost 70% of food produced in Tasmania being sold interstate or overseas. Increased production of food in Tasmania has resulted in growth of interstate sales rather than of export markets. The Tasmanian Food Industry Scorecard (DPIW Food Industry Scorecard, 2006-07) reports that total annual interstate food sales now approach \$1.3 billion, compared with \$0.5 billion worth of overseas sales. Much of this food is high-value. Tasmania is thus an increasingly valuable and appreciated "brand" in the Australian food and beverage marketplace, particularly (as well as internationally in other sectors such as fine wool).

Tasmania's branding builds on various well known and appreciated advantages: well managed natural resources, relatively abundant and accessible water, freedom from genetically modified organisms, relative freedom from significant pests and diseases, and legislative controls preventing use of hormone growth promotants in cattle. These characteristics, however, generally confer a market access advantage rather than a significant price advantage that is reflected at the farm gate. For the State as a whole, nonetheless, agriculture is seen as a key economic driver into the future, and the ongoing viability of the farm sector is therefore of critical concern to the Government.

#### Key Themes for the Future of Tasmanian agriculture

The following key themes are not radically different from those applying in other parts of the country. But Tasmania's island status, climate and size all combine to give the relevant themes a distinctive slant. It is also to be noted that in all of these there is potential or actual influence on the part of government.

Before looking at these six themes, it is to be noted that some very large international or national issues are not specifically covered. One is international trade, and the development of a less corrupted world marketplace for agricultural products. It remains a matter of critical importance, and one that the Australian Government must continue to pursue. But it is not something that Tasmania can greatly affect, or where our position is different from other parts of Australia. Another is the application of the Carbon Pollution Reduction Scheme. The issues on this matter have been well described by others (including in the submission by the NSW

Department of Primary Industries). Tasmania agrees that this is an issue that requires urgent and cooperative work, and will participate actively in reaching a workable outcome for agriculture.

Another national issue that is particularly important at this time is the continued support and refinement of tools that can support farmers in managing the fluctuations inherent to their industry. As noted in relation to the dairy industry, mechanisms such as Farm Management Deposits are of critical importance, and need to be supported and where appropriate extended. By their nature, they are almost always dependent on action by the Australian Government.

The following, issues, however, are ones that are considered of particular importance to Tasmania.

(1) Water and other innovation opportunities. As already indicated, agriculture is not only a large existing industry in Tasmania, but it is one that is considered to have great potential. The Government's central focus on innovation includes an intention to support the rapid growth of agriculture in the State, based on expanded irrigation infrastructure and a range of policies to promote excellence in the industry.

In short, agriculture is not in any sense regarded in Tasmania as a declining industry to be "adjusted" to ever lesser relevance, but as a central part of the State's economy into the future, and a focus of innovation in its own right. This is not to say that there are no problems, some of which are discussed below. But these problems are to be considered in the context of seeing this industry as having a high profile in the State's future planning.

(2) Market power issues. This is also discussed further below, including in relation to the specific case of the dairy industry. But it is arguable that the issues are more important, generally, in Tasmania than elsewhere. This is because the State's size and industry composition mean that relatively small numbers of farmers, often individually of limited economic strength or bargaining power, are inherently at a disadvantage as against the companies that provide their buying market. Furthermore farmers, being at the beginning of the production chain, find it less easy than processors, distributors and retailers to pass on increased costs of production.

Naturally the ultimate regulating power in this context is the ACCC, and its work in attempting to maintain the balance between buyers and sellers is acknowledged. However, the Government is highly conscious of what is often perceived as a power imbalance in this area, and urges the ACCC to continue providing for reasonable bargaining frameworks for farmers.

(3) Expectations around Natural Resource Management and animal welfare. NRM in the broadest sense is considered a particularly high priority for Tasmania, due to its increasing reliance on the general perception of the island as a place with a high proportion of natural landscape, a distinctive temperate farming landscape, and an early and now well established "clean green" reputation. The Government is also very conscious that farmers as a group control a large proportion of our land mass. As custodians they provide services which sustain the resource for future generations and maintain the landscape in an aesthetically pleasing state and condition, in line with the expectations of the community in general. However, these

services, from which the general community derives benefits, are provided by farmers at their own cost and often with little positive contribution to business profit.

This issue has been discussed at some length in the submission by TIAR, and the Department strongly supports its emphasis on creating policy settings that help ensure that the costs of such services are borne (or at least shared) by the beneficiaries. This can be both by direct incentives – such as stewardship payments and "landcare" programs, in the broad sense – or by encouraging more realistic consumer prices, including though mechanisms such as "truth in labelling" that inform customers of the real value they purchase in local products.

Similar issues arise in the increasingly salient area of animal welfare, where changes in public expectations put pressure on farmers to make often expensive improvements to their farm systems. Yet these are in tension with price expectations, which tend to encourage systems such as battery egg farming or intensive pig stalls. In all these matters farmers have to manage complex balances, often especially hard for smaller producers, of whom there are many in most Tasmanian agricultural sectors. At the least, governments have to deliver clear policy settings, and where possible, national consistency.

- (4) Biosecurity. The Tasmanian community and government have long pressed a particularly strong argument in relation to biosecurity in general. This reflects the State's island nature, and a very widespread consciousness of the specific differences and advantages that this delivers. Thus the State will continue to argue for the strongest measures that are practicable, and consistent with international obligations, to preserve the country and this State from new pests and diseases. It will also continue to insist on its ability to apply measures that may be different from those in other jurisdictions, in acknowledgment of its unique biosecurity status and potential.
- (5) Land use planning. This is a matter that lies almost entirely within the responsibility of the State, but is of critical importance in the longer term. Tasmania is unlikely ever to face the level of pressure on agricultural land that is posed by population and other pressures in parts of the mainland. But the very decentralisation of the State's population means that the interface between urban or residential uses and agriculture is very widespread. The management of that interface has not been easy anywhere in Australia, but the Tasmanian Government has kept it firmly in view. The almost completed review of the State Policy on the Protection of Agricultural Land is also supported by important improvements to the State's planning system. Among other things, these will help ensure that the planning issues around preserving the State's agricultural capability are well managed.
- (6) Research, Development and Extension (RD&E). This has already been touched on, but in light of the commitment to innovation in agriculture, it is worth restressing the importance the State places on this activity. The cooperative model embodied in TIAR was a deliberate effort to maximise the efficiency and effectiveness of this small State's RD&E resources, and to encourage genuinely integrated thinking and actions. The proposal to strengthen the State's agricultural education capacity is a

further mark of the intention to ensure that Tasmanian agriculture has both the skilled people and the applicable knowledge to support it into the longer term.

#### Introduction to the detailed information

From the discussion already, it can be seen that there is a range of long and short term issues that pose problems for the agricultural industry in this State. In the remainder of this submission, a few of these issues are highlighted, with reference both to selected industries, and to some cross-cutting issues.

To provide some context, the following table shows the most recent ABS figures on Tasmanian farm output. The proportions naturally vary annually, but it can be seen that farm gate production totalled about \$1.15 billion in 2007-08. A little more than half (56%) was accounted for by animal industries. The most important individual sectors were dairy (29%), vegetables (21%) and meat (20%).

Some further information follows on these three sectors (with wool), but the emphasis is on two that can be illustrated by relevant data (dairy and red meats / wool). The vegetable sector is treated briefly, in part because a substantial amount of work was done on that industry only a few years ago, and generated government interventions with State and Federal support. The dairy industry is treated in most detail, not only because it is the largest single agricultural sector in the State, but because its problems at the moment are among the most severe, and certainly have the highest profile.

Gross Value of Agricultural Production – Tasmania 2007-08

	\$m	\$m
Cereals	20.9	
Other Field Crops - oilseeds, legumes, hay, nursery	104.9	
Other field crops - poppies, pyrethrum & Essential Oils	46.1	
Fruit	67	
Wine Grapes	27.7	
Vegetables	236.3	
Total Crops		502.9
Meat	229.4	
Wool	71.2	
Milk	332.4	
Eggs	9.8	
Total Livestock		642.8
Total Agriculture		1145.7

Source: ABS Value of Agricultural Commodities Cat No 7503.0

## The Dairy Industry

The Tasmanian dairy industry has adjusted well to market conditions and seasonal variability over many years by the adoption of improved technology and increasing the scale of farm businesses. Chart one shows the ongoing fall in the number of dairy farms and the increase in Tasmanian milk production. There are currently 450 Tasmanian dairy farms. Chart two details the pattern of herd size change, which shows the average Tasmanian dairy herd is now 312 cows. This is higher than that of other States because Tasmania has proportionally more large herds of more than 550 cows.

Chart 1: Changing demographics of the Tasmanian dairy industry

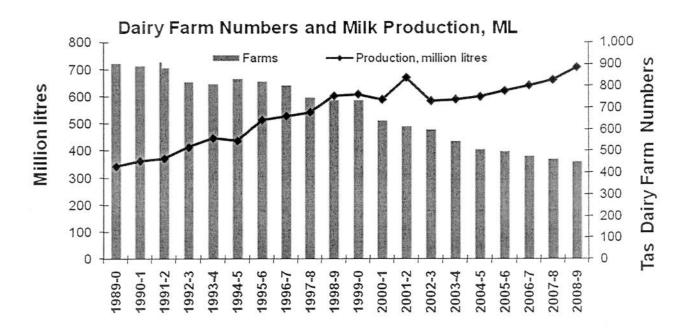
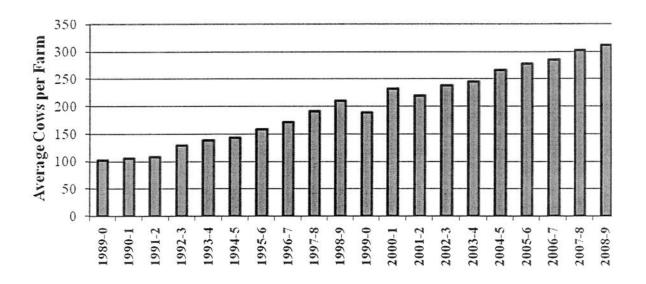


Chart 2: Average Tasmanian dairy herd size (cows per farm)



Information from the Tasmanian dairy benchmarking program (Table 1) shows the changes in key farm performance indicators over the decade to 2007-08. Gradual productivity improvements through increased pasture production, more milk per hectare and more milk per cow have enabled dairy farmers to achieve both adequate profitability and reasonable returns on their investment. The average return on assets for benchmarking farms from 2000 to 2008 was 6.3%. This clearly demonstrates the value of investing in research, development and extension, and of the adoption of its outputs by industry.

Table 1: Tasmanian dairy benchmarking key farm performance indicators

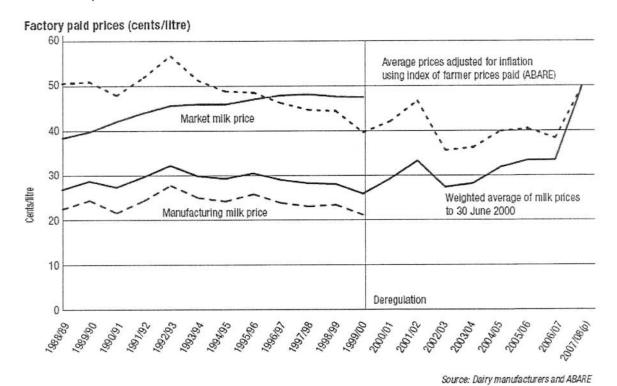
# Tasmanian Dairy Benchmarking Figures Averages for All Participants

		5							
	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08
Key Performance Indicate	ors								9000 (State State St
Return on Assets, % Operating Profit (EBIT), \$	4.1% \$54,405	6.6% \$110,895	10.9% \$164,994	3.8% \$63,494	4.8% \$86,985	7.9% \$171,939	5.7% \$174,626	4.6% \$163,185	7.9% \$385,024
Farm Details									
Production, kg MS Cows Milked, nos Dairy Area, ha	103,276 319 186	108,619 315 178	107,728 295 198	103,912 310 184	108,767 294 178	129,653 335 192	142,701 364 206	151,646 400 220	171,995 466 239
Labour used, FTE Irrigation, % area irrigated	3.4 25%	3.4 26%	3.7 19%	3.7 25%	3.6 28%	3.7 27%	4.0 24%	4.0 29%	4.5 32%
Performance Indicators									
Milksolids per hectare, kg MS/ha Milksolids per cow, kg MS/cow	802 325	880 334	864 364	827 338	872 368	982 391	1,018 392	1,050 386	1,073 373
Stocking Rate, Home Farm, DCE/ha Pasture - Home Farm, kg DM/ha	2.2 7,809	2.3 7,879	2.3 7,546	2.3 7,800	2.4 8,239	2.6 8,731	2.7 8,949	2.7 9,209	2.9 9,324
Dairy Assets & Liabilities		04.007	64.075	C4 404	64 504	CO 470	<b>CO 675</b>	60 474	61 011
Dairy Assets, \$'000 Liabilities, \$'000 Equity, %	\$1,346 \$370 73%	\$1,387 \$423 70%	\$1,375 \$359 74%	\$1,491 \$464 69%	\$1,584 \$410 74%	\$2,172 \$484 78%	\$2,675 \$683 74%	\$3,471 \$944 73%	\$4,811 \$1,602 69%
Assets per cow, \$/cow Liabilities per cow, \$	\$4,503 \$1,161	\$4,513 \$1,344	\$4,937 \$1,216	\$4,700 \$1,498	\$5,635 \$1,314	\$6,482 \$1,444	\$7,348 \$1,876	\$9,186 \$2,206	\$10,641 \$3,346
Assets per ha, \$/ha	\$7,471	\$7,630	\$8,071	\$8,661	\$9,364	\$11,436	\$13,969	\$16,924	\$20,442
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Income & Expenses – per Milk Income, \$/kg MS Total Income, \$/kg MS	\$2.87 \$3.28	\$3.38 \$3.80	\$4.36 \$4.74	\$3.47 \$3.87	\$3.60 \$4.03	\$4.15 \$4.64	\$4.35 \$4.82	\$4.39 \$4.64	\$6.33 \$6.64
Total Operating Costs, \$/kg MS EBIT, \$/kg MS	\$2.80 \$0.47	\$3.00 \$0.80	\$3.37 \$1.37	\$3.37 \$0.50	\$3.31 \$0.72	\$3.37 \$1.27	\$3.69 \$1.13	\$3.81 \$0.83	\$4.76 \$1.87
Finance costs, \$/kg MS EBT, \$/kg MS	\$0.37 \$0.10	<u>\$0.37</u> \$0.43	\$0.30 \$1.07	\$0.34 \$0.16	\$0.29 \$0.43	\$0.30 \$0.97	\$0.39 \$0.74	\$0.45 \$0.38	<u>\$0.81</u> \$1.06
Participants									
Numbers As % of dairy farmers	38 5%	40 6%	47 8%	42 7%	50 9%	40 8%	35 7%	36 8%	46 10%

If the capital appreciation from rising land values is added to the return on assets from dairy farming in the above table, the total returns from dairy farming over the past decade have been high. The rise in land values increased the value of assets per hectare on the benchmarked farms nearly threefold, from \$7,471 to \$20,442 over the period 2000 to 2008. It must, however, be remembered that capital appreciation is not cash unless the assets are sold at the appropriate time and that it makes no contribution to cash flow or trading profit. Nonetheless, it does increase equity and allow increased borrowings which can be used to further grow the business. Unfortunately, in a downturn such as is currently being experienced by the industry, increased borrowings and reduced equity coupled with reduced cash flow can make businesses vulnerable.

Milk prices are a key driver of dairy farm profitability. Chart 3 shows average milk prices for Australia adjusted for inflation and thus the downward trend in real prices over the past 20 years. (Despite this general trend the record high milk price in 2008 was very close to the price in 1989.) This price series again demonstrates the importance of new technology and increasing operating scale in maintaining sustainable agricultural industries. Since 2008 the milk price has fallen nearly 50%, so current milk prices continue to reflect the trend decline in the inflation adjusted milk price.

Chart 3: Real price of milk



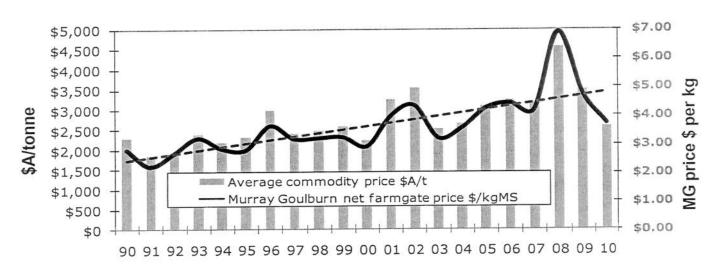
The Tasmanian and Victorian dairy industries are more export focused than dairy industries in other States. Only about eight percent of milk produced in Tasmania is

used to supply the local fresh milk market. As a result international dairy product prices are the major influence on the milk price paid to Tasmanian farmers.

Chart 4 shows the close relationship between the weighted average export price for dairy products, as paid by the Murray Goulburn Co-operative Co., and the price paid to Australian dairy farmers. The price paid for milk by Murray Goulburn Co-operative Co. is closely linked to that paid by Fonterra, the largest milk company in Tasmania. The milk price and average \$A commodity price shown for 2010 are the prices at the start of the season.

The opening milk price for the 2009-10 season is well below the milk price trend over the past 20 years. The wide variation in market prices from the record high price in 2009 of over \$6 to the current price of \$3.70 per kg milksolids (MS) has threatened the viability of many dairy farming businesses. It also demonstrated the need for farmers to have the ability to average their income across years through mechanisms such as tax averaging and farm management deposits. It is imperative these instruments are retained. Tasmanian dairy farmers have financial reserves in the form of farm management deposits (FMD). DAFF data shows that 180 Tasmanian dairy farmers had \$9.3 million in farm management deposits at March 2009. The average FMD is \$52,000. The high equity and FMDs mean that many dairy farmers have financial reserves that can be drawn down to offset the cash flow deficit caused by the current milk price.

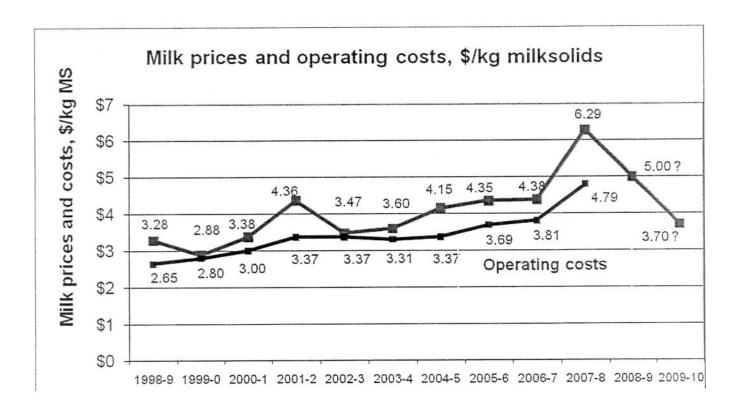
Chart 4: Average returns for dairy commodities vs farm gate price paid by Murray Goulburn Co-operative Co.



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The global financial crisis had a strong impact on the demand for dairy products. As a consequence the price farmers receive for their milk has fallen 45% from a peak price of \$7.00 in 2007-8 to \$3.70/ kg MS for the 2009-10 season. Chart 5, depicting

farm gate milk prices and farm operating costs (excluding finance costs), indicates that at the current milk price of \$3.70/ kg MS most dairy farmers are operating at below the cost of production. Farm operating costs increased by close to \$1/ kg MS in 2007-8 to \$4.79/ kg MS as a result of high grain, fertiliser and fuel costs. The price of these inputs has since fallen but farmers will find it difficult to get operating costs for the 2009-10 season below \$4/ kg MS. Finance costs vary between farms and range from nil to \$1/ kg MS.



At a milk price of \$3.70 / kg MS most Tasmanian dairy farms will have a cash flow deficit this season. Farmers with low equity (often young farmers and those expanding their business) will be the first to face financial pressure to sell assets and /or exit the industry. If milk prices continue at their current level more farmers will exhaust their financial resources and come under pressure to exit the dairy industry. This situation is not dissimilar to that of farmers facing drought, again highlighting the need for farmers to have access to decision support tools that can assist them in developing strategies to manage such circumstances. This situation also indicates the value of a proactive rather than a reactive support policy by Governments.

Low milk prices have also caused some banks to tighten lending criteria for dairy farmers due to concerns over debt servicing ability and reducing land values driven by reducing milk price.

Tasmanian dairy farmers have the lowest cost of production in Australia but, as in many other agricultural sectors, their businesses will not be viable if farm gate prices do not allow a profit to be made. The ultimate consequence is significant rural adjustment which has flow-on effects to both rural communities and urban service

centres. Such impacts are more pronounced in a State such as Tasmania where the economy is highly dependent on agriculture. Rural adjustment is not new in agriculture but under normal economic circumstances happens slowly as part of other businesses increasing their scale. Support services such as those provided by Rural Alive and Well are important to help farmers and their communities adapt to such adjustments.

As the milk price is below the cost of production it seems certain that milk prices will have to increase or supply from these markets will be lost. The uncertainty is how long it will take for the milk price to move back to a sustainable level. The Australian export index prepared by Dairy Australia shows that while international prices for dairy exports have increased in terms of \$US, appreciation of the \$A means the international price increases are not being fully reflected in the prices received by Australian dairy exporters and hence in the price paid to dairy farmers.

#### The Vegetable Industry

The vegetable industry is comprised of a diverse array of individual crops for both the fresh and processed markets.

Producers of processed vegetables and the processors are under pressure from bulk imported product, usually coming from countries that have much lower wage and compliance costs. Tasmania is seeing the decline in these industries which comprise approximately 75% of the State's vegetable industry. Reduced factory volumes for any of the component crops lead to increased overheads for the remaining crops and products at the processing level.

Well targeted and co-ordinated Research, Development and Extension (RD&E) programs aimed at improving productive efficiency and sustainable production need to be maintained for the industry to survive. For instance, the adoption of controlled traffic farming systems offers one opportunity to lift productive efficiency in the vegetable industry. A network of specialists undertaking industry development and extension activities is critical to assist adoption of research and development results. It must however be remembered that RD&E alone cannot continue to compensate farmers for their declining terms of trade.

Increased farm gate prices must also play a significant part in the future if vegetable production is to remain viable in Tasmania. The Tasmanian vegetable marketing initiative "Taste is in Our Nature" has done much to raise the profile of Tasmanian vegetables, establish a point of difference (taste) and build closer links to the consumer by branding and information at the point of purchase in participating stores, supermarkets, and on the web. The initiative has done much to raise the level of understanding of consumer values and improve collaboration through the production chain.

#### The Red Meat and Wool Industries

The Tasmanian red meat and wool industries are being encouraged to participate in a Government supported benchmarking project to define performance indicators and set enterprise benchmarks. Although this project has been in progress for three years it has not attracted the participation rate expected, but this is expected to improve with cessation of drought. Benchmarking is a valuable aid for producers to identify performance improvement opportunities and strategies to achieve them. Current financial benchmarking performance figures are summarised in Table 2 and the key points listed below.

- 1. Beef enterprise profitability in 2007 was about \$50/ha, or a 1% Return on Assets (ROA). This represents only a breakeven position when debt servicing is accounted for, and it may have deteriorated further in 2008.
- 2. Profitability for the crossbred sheep enterprises in 2007 was around \$100 /ha, or a 2% ROA.
- 3. Profitability for merino enterprises in 2007 was around a \$70/ha loss, or 3% ROA, worse when debt servicing is accounted for.
- 4. The top quartile beef farms were being operated on more valuable land and were characterised by producing almost twice the amount of beef/ha. As against the averages, this was accomplished through a 43% higher stocking rate, 30% more beef produced per dry sheep equivalent, and a 9% higher price per kg sold.
- 5. The top beef farms had a similar cost base to the average farms, and achieved their overall lower cost of production almost entirely through having higher levels of output.
- 6. Generally the level of equity is high in the businesses being analysed (approx. 90%).
- There is a significant variation in business performance, leading to the conclusion that the management skills of the business owner and the farm system being employed have a higher degree of impact than any other factors.

This data confirms the importance of conducting the physical and financial measurements necessary to enable businesses to assess their performance. It also shows the relatively poor financial returns being achieved by these businesses. Such information highlights the question of whether price, even in combination with adopting best practice technologies, can drive a significant improvement in profitability. Variability in performance remains an important issue, though difficult to address. However, Governments have a role in ensuring work continues towards researching, developing and disseminating new technologies.

Table 2. Financial benchmarking performance figures (2006/07) for beef, crossbred and Merino enterprises within the project (as at 15 of May 2009).

	Beef Ent	terprises	Cro	oss-bred Sheep	Merino Sheep		
	(n = 25)		(n =	= 7)	(n = 6)		
Indicator	Avg.	Top 25%	Avg.	Top 10% SW Vic.	Avg.	Top 10% SW Vic.	
Total DSE	5,53 0	4,211	2,885	3,113	9,897	2,224	
Effective Hectares	394	210	254	154	1,241	125.4	
Stocking rate (DSE/ha)	14.0	20.0	11.3	20.3	8.0	17.7	
Tot. LW produced/ha	274	510	106	193	44	86	
Operating profit/ha	\$53	\$384	\$109	\$385	-\$69	\$256	
Equity % (at 4 year av. values)	89.4	84.8	94.3	86.6%	92.4 %	85.9%	
ROA (at 4 year av. values)	0.8%	3.8%	2.1%	6.7%	-3.4%	4.6%	
ROE (at 4 year av. values)	0.1%	3.2%	1.7%	6.5%	-4.4%	3.9%	
ROE including capital gain	13.1 %	12.1%	15.8 %	15.6%	7.9%	13.6%	

Operating profit margin	12.5 %	42.8%	24.2 %	48.4%	36.8 %	39.1%
Cost of production /kg LW meat	\$1.3 6	\$1.01	\$2.31	\$1.70	-	Ξ
Average value per kg LW	\$1.5 1	\$1.65	\$3.55	\$3.66	÷	-

## Real Costs of Food Production through the Value Chain

There is great value in better understanding the structure and spread of costs and margins at all points along the value chain (subject of course to legitimate commercial confidentiality). This understanding allows more informed decisions by all participants, and provides a degree of clarity in assessing how far the entire system delivers affordable prices to consumers, and a viable business for farmers. Unfortunately there is still rather limited information about costs and prices received by farmers, processors, distributors and food retailers.

The dairy benchmarking report is a partial exception and the data reported demonstrates the tremendous value of having extensive information collected over a number of years. It provides clarity about on-farm costs of milk production and pathways to increasing the viability of farming. However, information beyond the farm gate is also needed, to assess the share of the final product value going to the farmers, processors and retailers, and to suggest how efficiencies might be made to ensure that food remains affordable to consumers.

For instance, in recent months dairy farmers have been financially challenged. Prices paid by processors have fallen sharply and are now below the cost of production. Yet the prices that consumers pay for whole milk, butter and cheese have not fallen. However, processors argue that world prices have fallen dramatically and therefore they must pay Tasmanian dairy farmers less to remain viable. Access to the type of cost/price data described here would help the industry partners to establish a fair outcome in this instance.

## Sustainable Environmental Impacts under Climate Change Conditions

Triple bottom line outcomes are now desired in all industries. It is obviously paramount to adopt agricultural practices that are environmentally sustainable if the world is to maintain a secure food supply for its growing population, in a context of climate change. Thus the development of management practices that achieve integrated economic, environmental and social outcomes is needed if Australian agriculture is to address Committee's terms of reference — to meet the needs of consumers, to support viable farm production, and to sustain the environment.

An example of this approach is the Tasmanian Institute of Agricultural Research (TIAR) strategic plans for vegetable and dairy industry research, released in September 2009. The plans clearly identify research, development and extension (RD&E) objectives to improve triple bottom line outcomes, and assist industry to meet the challenges of climate change.

It is generally accepted that climate change is occurring but the magnitude and rate of change are still subject to debate. In addition, natural variation has always been a salient characteristic of the Australian climate. It is therefore more than ever important that modelling and other research tools are available, to plan constructively for the food production systems that will be needed in order to adapt to the changed conditions.

Tasmania is collaborating with national projects that aim to deliver this information to local industries (such as "Climate Futures Tasmania") and sees this area as having a clear and ongoing requirement for government resources.

Current predictions for the future Tasmanian climate suggest that conditions for agriculture will be less dramatically affected than in other regions of Australia that also make a significant contribution to food production. However, climate change impacts in Tasmania will vary across the State. Further and more detailed modelling will help to assess impacts on a regional basis, taking into account topography, the high level of diversity in Tasmanian agricultural activity, and changes in management practices. Given that resources are limited it is imperative that Tasmanian businesses and organisations collaborate and share information.

Despite climate change effects, however, Tasmania is likely to retain a significant advantage in its potential to capture water for irrigation. The Tasmanian Government is therefore partnering with both the Australian Government and local agricultural industries to invest very substantial funds in irrigation infrastructure. The aim is to develop an additional 240,000 megalitres of irrigation capacity, sufficient to underpin a future role for the State as one of Australia's most reliable and productive "food bowls".