Productivity Commission Inquiry into the Australian Government Research and Development Corporations Model

by

Australian Beef Association Inc

September 7, 2010

Australian Beef Association makes this submission in response to Meat and Livestock Australia's letter to the Productivity Commission dated August 13, 2010.

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Introduction

In its letter to the productivity Commission of August 13, 2010, The Chairman of Meat and Livestock Australia states that Australian Beef Association has made inaccurate claims in its submission.

ABA makes this submission to restate that the core issue is the lack of information and outcomes from MLA's $700 million expenditure on R&D.

If there are "inaccuracies" in the ABA submission they are entirely due to the poor level of disclosure and accountability by MLA.

As an organisation that represents farmers, ABA wishes it had better data to work with.

Number of projects

MLA states that it monitors and tracks all its R&D projects and can account for all funds spent on R& D, however MLA does not present any quantitative data to support these claims.

The ABA estimate of the number of R&D projects that MLA has funded is based on the scanty data presented in MLA's Annual reports and other documents.

As set out in ABA's previous submission, MLA provided no data on R&D expenditure or number of projects in the seven Annual Reports, from 1998/9 till 2004/5. The annual report 2005/6 provides a schedule of R&D expenditure for the years 2001/2 until 2005/6. The MLA Annual Reports 2006/7 till 2008/9 provide expenditure data and indicate the number of new, completed or terminated and live projects.

ABA's estimate of 4,000 projects and total R&D expenditure is based on a common sense interpretation of this information.

MLA can settle this issue by simply publishing a schedule of R&D projects that includes the beneficiaries of the funds, and the amount of money allocated to each project. The count of the projects and the sum of the expenditures should provide the answers.

Projects vs Contracts

MLA has raised the issue of the definition of the terms "projects" and "contracts".

These terms may well have different meanings with respect to MLA R&D arrangements.

However, MLA Annual Report 2008-09, page 14, column 1, Line 11 states: (Attachment 1)

> "We completed ***382 R&D projects*** during the year and began ***194*** and in parallel we supported 21 researchers through our postgraduate and scholarship program, which bridges education with agricultural research."

Four lines below this text is a table titled "R&D Investments"

R&D INVESTMENTS	
No. of projects	2008-09
New contracts	$27.3m (***194***)
Completed and terminated contracts	$47.4m ***(382)***
Live contracts at 30/06	$75.1m (276)

(Reproduced in part. Bold italics are our emphasis)

The text says "382 projects" and the table refers to "382 Completed and terminated contacts". The text states MLA began 194 "projects" and the table refers to 194 "New contracts". The first line of the table reads "No. of projects" then uses the term "contracts" below.

From the above it is clear MLA is prepared to use the terms projects and contracts interchangeably.

The difference between the term "project" and "contract" is significant.

In its letter of August 13, 2010, MLA states: "This distinction (projects vs contracts) is important as projects often have multiple contracts – up to as many as 200 for any one project."

ABA agrees with MLA that the distinction is very important.

This admission suggests the project or contract count reported in the Annual Reports of 2006/7, 2007/8, 2008/9 could be in error by a factor of 100 or more.

It also raises the question of the total number of contracts entered into by MLA. Based on ABA's estimate of 4,000 R&D projects, MLA has entered anything between 4,000 and 40,000 contracts. (4,000 contracts based on 1 per project or 40,000 based on 10 per project, given individual projects can have up to 200 contracts.)

ABA presumes these contracts are legal agreements between MLA and other parties.

> Where is the registry/data base of these agreements?
> How many are there?
> Who drafts the terms and conditions?
> Who evaluates legal compliance with the terms on behalf of MLA?
> Who evaluates compliance with the R& D objectives?
> Who monitors the progress and authorises progress payments and final payments?
> How many have been completed?
> How many are current?
> How many contractors have failed to meet their obligations to MLA?
> How many have resulted in court action to recover costs or compensation by either party?
> What were the outcomes of these proceedings?

This revelation about the nature of contracts and projects, questions the truthfulness of the disclosures in MLA's Annual Reports. Clearly, MLA was aware of the legal and technical distinctions between projects and reports. Clearly, MLA was aware of the huge numerical difference between the number of contracts and projects. Yet MLA deliberately failed to make this distinction in its Annual Report. MLA deliberately equated contracts to projects.

This raises further questions. Were the Directors aware of this distinction? If they were aware of the difference, did the Directors approve the glossing over of the difference and the use of the terms "contract" and "project" as synonyms?

The allocation of R&D funds is not directly the responsibility of the Company auditors. However, the contracts between MLA and R&D providers are legal and financial documents. R&D accounts for about one third of MLA's $150 million budget. Were the Auditors aware of the existence of thousands of these contracts? Did the Auditors know that contracts where being passed-off as "projects" in the Annual Report? Did the Auditors agree to this terminology? Where the Auditors misled as was any person reading the MLA Annual Report?

Many MLA voting members have been the beneficiaries of MLA R&D funds. Given that few projects or contracts are disclosed this begs the question: How many of MLA's major vote holders have received MLA R&D funds? This is a particularly acute issue for MLA give that despite its 47,000 voting members (most with only one vote), a handful of members (with tens and hundreds of thousands of votes each) effectively determine outcomes at MLA AGMs.

The MLA Annual Report provides a schedule of related party transactions for Directors. It does not provide a similar statement for major vote holders.

MLA should be required to disclose all payments to individuals or corporations that have power to influence the company be they directors or major vote holders.

Excuses for not listing projects

New database

MLA states the database has only been active since 2004. 2004 was five years ago.

There is no excuse for taking five years to simply list the title, a project description or abstract, the funded individual and/or organisation and the funds allocated to the project.

Scanners have existed for more than a decade. Billions of pages of pre 2004 R&D can be found on the Internet, including Australian agricultural and meat science.

This is a lame excuse of the non disclosure of hundreds of million of dollars of R&D.

Commercial in confidence

This is not an excuse for not listing a project. It may be a reason for delaying the release of the findings.

This is a very serious issue as MLA claims that 30% of its R&D expenditure falls in this category.

MLA spends levy payers and taxpayers' funds on R&D. Ultimately all findings of all its R&D, belong to levy and tax payers.

Levy payers and taxpayers have a right to know exactly what projects have been commissioned with commercial in confidence conditions. They have a right to know; the objectives of the project, the beneficiary of the funds, and the amount of money contributed by MLA and the private party and the terms of the exclusivity agreement.

The scrutiny and transparency of commercial in confidence research should be greater than for public research given the direct commercial benefits that flow to the individual recipient of the funds.

Where a project/contract is part funded by an individual or company, quite reasonably the company can be rewarded with some commercial advantage from the findings.

This reward can be exclusive access to the results. But this exclusivity cannot be in perpetuity, given industry and taxpayer funding.

This issue here is disclosure of the existence, objectives and the precise exclusivity parameters of the projects and contracts.

This is a totally separate issue from the findings or outcomes themselves.

Levy and tax payers have a right to know if the private funder has exclusivity for one day or ten years or a payback of one times the private contribution or a million times this contribution.

Dedicated off farm website.

MLA refers to www.redmeatinnovations.com.au. This website lists about 150 R&D projects. About half were completed before 1998. The site includes some excellent reports dating back to the mid 1970s.

MLA can claim no credit for commissioning about half these projects. (MLA could ask to borrow the scanner)

MLA has commissioned about 4,000 projects. This website lists about 75 projects or about 2% of projects – hardly a major source of MLA R&D results.

(ABA has not yet checked how many appear on both the MLA and www.redmeatinnovations.com.au database)

The AMIC website www.ampc.com.au has a button for R&D. The R&D database is for the exclusive use of about 130 AMPC members. The R&D section is not accessible to researchers. The content, if any, of this part of the website is unknown.
The author was declined access this part of the website. (See Attachment 2)

MLA states that these websites are a major tool for the dissemination of R&D. This claim is not true.

Other program areas

MLA states that market information and analysis, scholarships and leadership skills programs qualify as R&D. ABA accepts that some of these programs may qualify as R&D. But MLA has spent $700 million. How much has been spent on the above programs? Of the 4,000 projects how many fall in the above category?

Alternative delivery mechanisms

MLA does not seem to be able to distinguish between the formal publication of R&D for the purpose of recording the work as science for future reference and extension where the primary aim is to draw attention to the work and provide a summary of the findings.

For example: MLA's flagship R&D publication is: *Prograzier, delivering R&D results to producer*s. The Spring 2010 edition includes a "Feature" story on page 2. (See Attachment 3) The title reads: Growth potential – the perfect match between genetics and the environment. The introduction reads: Choosing the right animal genetics to suit the environment is the best way for producers to get the most value out of their investment in livestock.

A highlights box reads:

Key points

- Genetic livestock interactions affect how livestock will perform.
- Fat cover, milk yield and growth are key genetics that need to be matched to the environment for optimum performance.
- A good match between genetics and the environment can help lower costs of production.

The article also includes some sound advice on understanding your production system:

- annual rainfall and whether it is winter or summer dominant
- temperature extremes across the seasons, pasture growth pattern
- The type of feed that can be grown and its quality the availability and use of supplementary feeds
- any naturally occurring animal health issues (such as ticks or high worm burdens)

This is all very excellent advice. But they are all motherhood statements. They could all be found in a high school agricultural science textbook – 30 years ago.

A journalist's summary of an R&D project does not constitute science nor is it an alternative for the formal listing and reporting of R&D projects and their outcomes.

Confusing the reporting of R&D output and accountability with extension brochures and booklets is a pitiful excuse for failure to formally catalogue $700 million in expenditure and an estimated 4,000 R&D projects.

The importance of publishing R&D

R&D that is not accessible to the research community, the cattle and meat industry and the public effectively does not exist. Publishing watered down "science" in glossy booklets, perhaps with big print runs, but poor readership is an absolute waste of time.

Science must be formally catalogued so scientists and commercial organisations can find it. This is essential to ensure the incremental increase in knowledge and to avoid duplication that is a waste of money and the precious skills and time of researchers.

From a practical perspective most of the $700 million spent on R&D by MLA over the past decade has been lost to the meat industry and the wider scientific community. It is a waste of money and more importantly a waste of the time and effort of the researchers who did the work and of the researchers who will repeat it.

The wider opportunity cost, including the loss of technical innovation, efficiencies and commercial returns that have not been realised, is immense. Based on the multipliers MLA use to calculate the benefits of their R&D, this loss is in the order of billions of dollars.

Slush Fund

The absolute lack of records and accountability of MLA's R&D program suggests that this component of MLA's budget is little more than a slush fund.

MLA's R&D expenditure looks like a slush fund because:

- MLA cannot state how many projects it has funded
- MLA cannot state how many contracts it has signed
- MLA cannot list the beneficiaries of its $700m R&D expenditure
- MLA has increased the number of commercial in confidence agreements (now 30% of all R&D expenditure) to further obscure the beneficiaries of R&D grants.
- MLA has no systematic format for listing or publishing its R &D results that allows scientists, industry, producers and the public to access the findings for research or commercial applications.

And because endorsements of MLA's R&D program come primarily from:

Consultants engaged and paid by MLA
Scientific organisations that are beneficiaries of MLA's R&D funds
Government organisation that are beneficiaries of MLA's R&D funds
Meat industry organisations such as AMPC and Peak Councils that oversee MLA's R&D spending.

Conclusion

MLA has spent $700 million on R&D. The endorsement and praise for this program by consultants, company directors and Peak Councils is baseless given MLA is unable to even provide a schedule of projects, let alone reports.

The lack of measurable outcomes shows there are many major shortcomings with the R&D Corporations model, particularly in relation to the arrangements that apply to the red meat industry.

These shortcomings include: management and accountability at the operations/corporation level (MLA), wider industry level (Peak Councils) and by government departments (on behalf of the public).

ABA requests the Productivity Commission establish a major review of the red meat industry R&D model.

Attachments:

1) MLA Annual Report 2008-9, Page 14
2) Email from AMPC declining Access to R&D data base
3) *Prograzier*, Spring 2010, page 2 & 3

The Australian community

The $62.8 million invested in 2008-09 for research and development delivered a range of outcomes – not just for the red meat industry but for its consumers and the community in which it operates.

Future science

Australia's innovation capability influences the productive performance of the national economy and contributes to higher living standards.* We support and foster the future capability of the research community through scholarships and training.

Investing in red meat R&D not only benefits our industry directly but contributes to the broader bank of scientific knowledge in Australia. We completed 382 R&D projects during the year and began 194 and in parallel we supported 21 researchers through our postgraduate and scholarship program, which bridges education with agricultural research. More than 220 postgraduate students have been supported through MLA and its predecessor organisations since 1975. The scholarship program supports students undertaking postgraduate studies for the three years of their candidature.

R&D INVESTMENTS

No. of projects	2008-09	2007-08	↑↓
New contracts	$27.3m (194)	$33.5m (412)	↓18.5%
Completed and terminated contracts	$47.4m (382)	$31.1m (436)	↑52.4%
Live contracts at 30/06	$75.1m (276)	$99.1m (464)	↓24.2%

Students' projects are varied and cover a wide range of industry-related topics, and include all areas of interest in our on- and off-farm R&D programs.

TRAINING FUTURE RESEARCHERS

	2008-09	2007-08	% change
Scholarship	$429,251 (18)	$411,585 (23)	↑4%
Postdoctoral	$311,741 (3)	$243,710 (3)	↑28%
Total	$740,992	$655,295	↑13%

While our overall investment has increased, the reduction in scholarship numbers is due to a refocus within scientist training from postgraduate scholarships to postdoctoral fellowships.

Working better

Another issue we are seeking to address is staff turnover and the resulting instability for businesses in Australia's rural economy. Around 42 per cent of employees are expected to leave our industry over the next five years costing an estimated $327 million. In conjunction with Australian Wool Innovation we conducted a survey on nearly 1,000 employees to find out critical factors that could improve job satisfaction. The results released this year recommended employers take a professional approach to staff development including systems for rewarding good performance, better communication, fair pay and futu job certainty.

Work-related injuries are an important issue for businesses in our industry and the communities in which they operate. Research in occupational health and safety issues has delivered solutions that minimise work injuries and gives job access to a broader group of people in the community. A key project we jointly delivered this year was the 'boning arm' – an operator assisted beef boning machine that redu the number and severity of occupational, health and safety problems on food processing lines. Installed in five plants, device also increases yield gains and chain speed efficienc adding up to a total of $4.53 per head processed.

Eating well

We work in consultation with key experts, policy makers and leading health organisations to ensure dietary recommendations relating to red meat are consistent, credi and importantly, based on accurate information. Throughou the year we continued partnership programs with the Heart Foundation and the Dietitians Association of Australia; facilitated workshops on food policy and the environment; contributed to discussions on relevant food and nutrition p

Importantly our body of scientific evidence continued to contribute to the clinical management of chronic diet-relate conditions, particularly weight management and diabetes which currently cost the nation $6 billion annually.** During year we also collated and communicated evidence on eatir patterns and behaviour shown to contribute to better healt outcomes, including prevention of childhood obesity as we as prevention of important nutrient deficiencies, such as iro and zinc. The evidence indicated that toddlers and women child-bearing age are at risk of low iron and zinc and that ir deficiency may decrease their required cognitive function.

* *Council of Rural Research and Development Corporations' Chairs Submissic the national Innovation System Review, 2007*

** *CIE report: Red meat nutrition marketing – the industry impact, 2008*

An MLA and AWI funded survey suggested that employers should take a professional approach to staff development to reduce instability in their business and the broader rural community.

Subject: RE: new AMPC member registration notification
Date: Monday, 30 August 2010 8:38 AM
From: Irene Parker <irene@ampc.com.au>
To: Athol Economou <optimalnews@majestic.net.au>
Conversation: new AMPC member registration notification

Dear Athol – thank you for your email. Unfortunately we are unable to give you access to the member area of our website as this is strictly for AMPC Red Meat Processor members only.

Regards

Irene Parker

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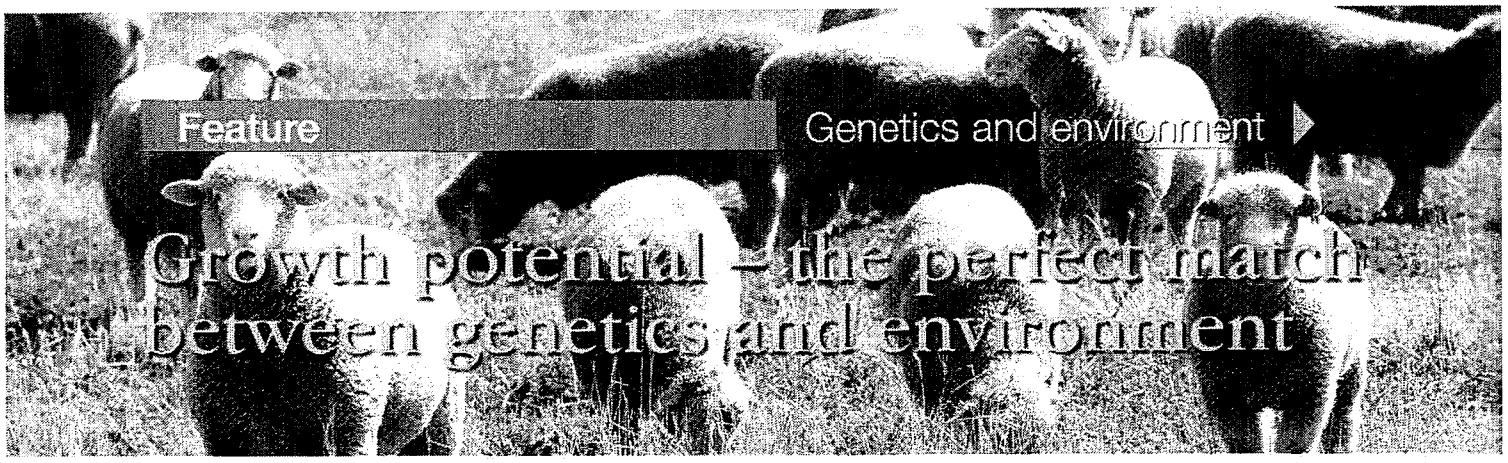

Growth potential – the perfect match between genetics and environment

Choosing the right animal genetics to suit the environment is the best way for producers to get the most value out of their investment in livestock.

Getting the balance right in terms of managing the environment and hence animal nutrition, to maximise genetic gain, is essential to achieving advances in productivity and profit.

While difficult to quantify, Hutton Oddy from the University of New England and Beef CRC, reported that improvement in nutrient availability – which derives predominantly from management of grazing systems and industry structure (grass versus grain-based finishing) – was estimated to be responsible for 78% of the per head productivity gains within the beef industry between 1985 and 2005.

Genetic improvement on a per head basis was estimated to account for the remaining 22% of productivity gain over this time frame (Table 1). Therefore to make the most out of any significant investment into genetics, it is essential to have the fundamental management skills that enable optimisation of available resources. This is to ensure adequate nutrition can be supplied to meet animal demand at critical times of the year.

The interaction between livestock genetics and the production system under which the livestock are run affects how they will perform. This is reflected in the success and profitability of the farming enterprise.

Key points

- Genetic livestock interactions affect how livestock will perform.
- Fat cover, milk yield and growth are key genetics that need to be matched to the environment for optimum performance.
- A good match between genetics and the environment can help lower the cost of production.

Understanding the production system

James Whale, a consultant with Mike Stephens & Associates, Ballarat, Victoria, said the first step to achieving a balance between genetics and environment was for producers to have a clear understanding of their own production system and its livestock breeding or finishing goals.

Considerations include:

- annual rainfall and whether it is winter or summer dominant
- temperature extremes across the seasons, pasture growth patterns
- the type of feed that can be grown and its quality
- the availability and use of supplementary feeds
- any naturally occurring animal health issues (such as ticks or high worm burdens)

These factors have to be considered alongside production goals and target market specifications for age, weight, fat cover and muscle.

"First and foremost, a producer needs to have a good understanding of their own production system," James said.

"What are the key profit drivers in the business, and what traits are costing time or money?

"Ideally, commercial producers will have spent time determining a suitable breeding objective for their herd or flock. This is done by placing values on a range of individual traits that impact on the bottom line of the business.

"An appropriate breeding objective will always take account of the environment and the production system the flock or herd is being run under."

Knowing the environmental impact

James said that not all genetic traits were affected by the environment. A simple example is the horn or poll gene in cattle and sheep.

"Genetics environment interactions for different traits and animal species vary widely in their economic importance," he said.

"The performance of many livestock traits does not change greatly when

Table 1. Contribution of genetic improvement and non-genetic technologies to per head productivity improvement in the Australian beef industry from 1985 to 2005

	1985	2005
Annual production of beef (million tonnes)	1.3	2.06
Carcase weight (kg)	218	270
Number of cattle (million)	5.96	7.63
Turn-off age (years)	2.75	2.3
Average growth rate (kg/d)	0.370	0.559
Genetic change (kg per head)	0	35
Genetic contribution to the improvement in growth rate (%)	–	22
Non-genetic contribution to the improvement in growth rate (%)	–	78

Source: Oddy, V.H. (2009) Ruminant Nutrition – Perspectives and Prospects. Recent Advances in Animal Nutrition – Australia 17: 103-110

run in different environments or production systems.

"However, the performances of some traits are known to vary with the environment, and the key to getting the genetics environment balance right is determining how important individual traits are to your system."

James said fat cover, milk yield and growth were three key animal genetic traits that needed to be matched to the environment for optimum performance.

"For example, fat cover may be a far more important factor for a beef herd run in a region notorious for short growing seasons," he said.

"In this case, the selection for fatness may be a high priority as the costs involved through extra supplementary feeding of genetically leaner breeding cows will be higher and less profitable.

"In contrast, a cow-calf operation being run in a high rainfall environment with a longer growing season is likely to put more emphasis on high growth and milk yield in genetic selection due to lower costs in supplementary feeding."

Reducing cost of production

James said a good match between genetics and the environment could help lower the cost of production.

An appropriate breeding objective will always take into account the environment and production system.

"The cost of production is an important factor for all producers, and genetics can have a big influence on the costs involved to produce a kilo of lamb or beef," he said.

In recent years, there has been a shift away from larger-sized breeding females to more moderate types for greater efficiency.

Selection for maternal efficiency

"In both the beef and lamb industries, we are seeing an increased focus on cow and ewe efficiency," James said.

"This has occurred due to a growing concern that the increased mature size of breeding animals has increased the costs of production through higher costs of maintenance.

"This realisation is encouraging many producers to select genetics that will moderate the mature size of breeding animals while retaining genetic capacity for high growth."

Selection for fat cover

James said another area where producers needed to make their own judgement was on the selection of fat cover for breeding stock, as running genetically very lean ewes or cows in tough environments could cause fertility issues and increase feed requirements.

"In some instances, there is probably a legitimate argument to select for fatness in maternal genetics so that annual maintenance costs can be reduced, and then to rely more heavily on terminal genetics to ensure carcase specifications are met," he said.

"Some recent research with Merino ewes in Western Australia has identified higher fertility in ewes with higher Australian Sheep Breeding Values for fatness and muscle. These differences in genetics were expressed more greatly following poor seasonal conditions."

Ultimately, James said there were no hard and fast rules for producers to follow, as there were so many variables involved when it came to matching genetics to the environment for the best outcome.

Matching livestock to the environment

He said most producers, to some degree, were already matching their livestock to their environment and a lot of it was commonsense.

"A good example is a lamb business whose target market is sale of sucker lambs in December each year," James said.

"The lambs are born in late July–August, and lambs are sold when they reach an estimated dressed weight of 20kg. In this operation, the majority of lambs are finished on pasture and sold between four and five months of age.

"The producer is focused on reducing the number of lambs that do not meet sale weight by December, but does not want to lamb any earlier due to the costs of supplementary feeding in winter.

"In this situation, a good genetic match to the environment would be terminal genetics that have fast early growth and high muscle. Early maturing terminal genetics is critical for this producer to get as many lambs to saleable weights with suitable carcase shape by December.

"Another high priority would be ewe efficiency and running maternal ewes of moderate size, with high fertility and high lamb survival."

"The key to getting the genetics and environment balance right is determining how important individual traits are to your system."

More information

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- ***Beef genetics toolkit* CD**
  www.mla.com.au/publications

www.mla.com.au/genetics