

**Submission in response to the**

# Tax Discussion Paper

**May 2015**

**AUSTRALIAN LOT FEEDERS' ASSOCIATION (ALFA)**

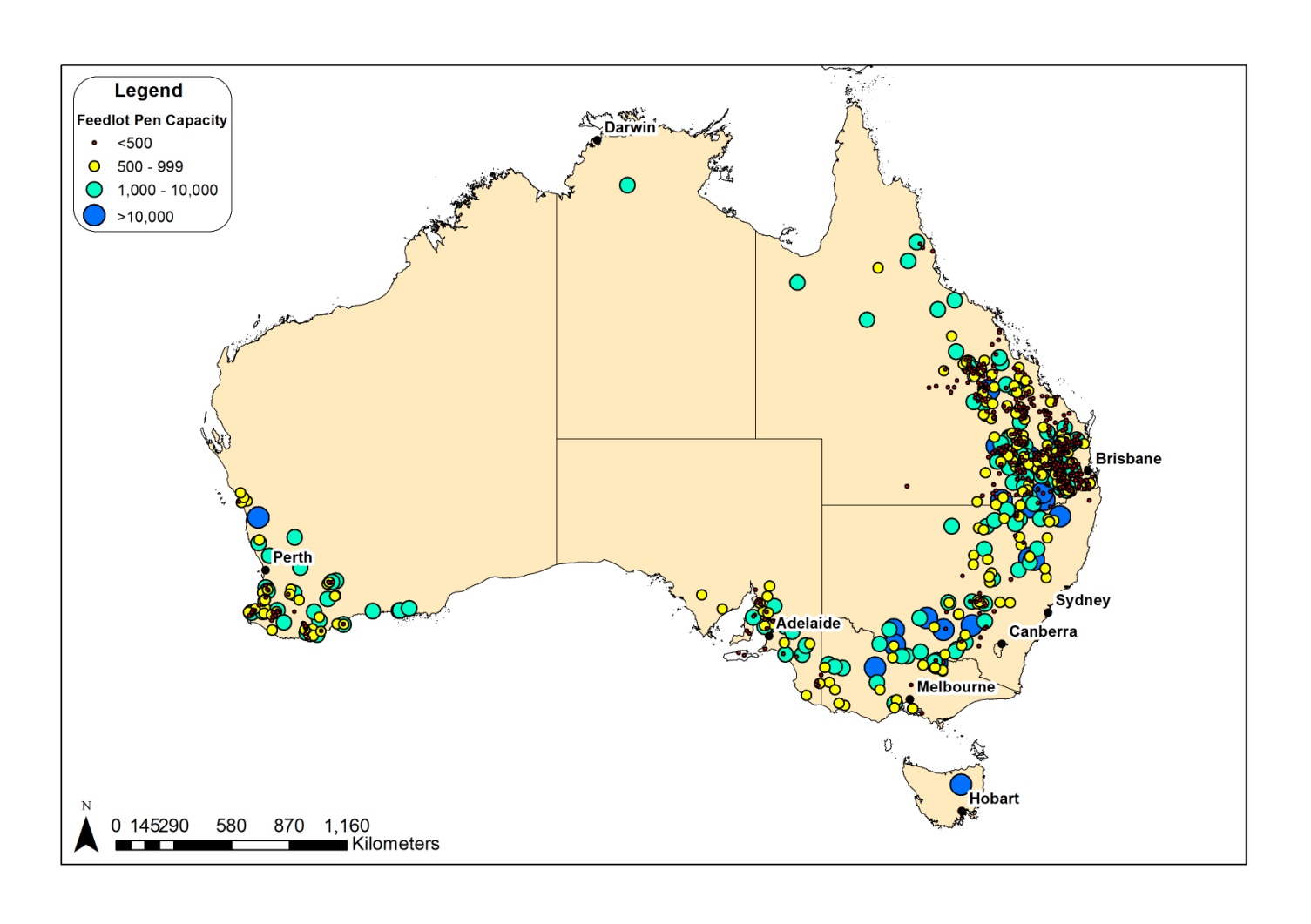
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The Australian Lot Feeders’ Association (ALFA), the peak representative body for the cattle feedlot industry, appreciates the opportunity to respond to the Commonwealth Government’s tax discussion paper.

The cattle feedlot industry has a value of production of approximately $2.6 billion and employs some 28,600 people directly and indirectly. Approximately 40% of Australia’s total beef supply, 80% of beef sold in domestic supermarkets and the majority of beef industry growth over the last 15 years has been due to the expanding feedlot sector.

There are approximately 400 accredited feedlots in Australia located in areas that are in close proximity to cattle, grain, water and beef processing facilities. The majority of feedlots are located in Queensland followed by NSW, WA and then Victoria and South Australia.

**Graph 1. The location, number and size of feedlots throughout Australia**



The Australian cattle feedlot sector exports around 40% of its production to over 100 countries around the world. Accordingly, the need to be internationally competitive is imperative, particularly in less developed countries where price is the main driver of demand. In other markets, Australia has relied extensively on its systems and programs that enable it maintain a reputation as a supplier of ‘clean, green, disease free’ beef.

ALFA’s submission in relation to this discussion paper will focus on the review of the R&D tax incentive provided to businesses. Notably, whilst the benefits from the R&D tax incentive are not confined to agriculture, there are a number of reasons why such incentives should be retained from an agricultural perspective.

The benefits of investment in rural R&D have been extensively investigated. While hard to quantify with any precision, there is little doubt that the overall payoff for both producers and the community from past investments has been significant.

The inherent diversity of the agriculture, fisheries and forestry sector translates to a broad research agenda, with the direct benefits from rural R&D taking many forms. For instance, industry benefits can include:

* improvements in productivity, efficiency and hence international competitiveness
* enhanced supply chain knowledge, management and efficiency
* reduced impact from pests and disease.

Consumers and the wider community can also benefit from spill overs, through such things as:

* better standards of living (through cheaper and higher quality food)
* improved environmental amenity
* greater capacity within rural communities to adjust to changing circumstances (which may in turn reduce calls on the welfare system).

Much empirical work has attempted to quantify the returns from investment in rural R&D. One commonly cited source (Mullen 2007, 2010) indicates a rate of return in Australian broadacre farming of between 15 and 40 per cent, with the Productivity Commission (PC 2007) suggesting potentially higher average returns. More recently, an evaluation of projects undertaken by Australia’s Rural Research and Development Corporations (RDCs) has estimated that for every $1.00 invested in R&D, the average return after 25 years is $10.51 (CRRDC 2010) — broadly equating to a rate of return of around 50 per cent.

Empirical research on the returns from investment in rural (and other) R&D was comprehensively examined in the Productivity Commission’s 2007 report on public support for science and innovation. As the table below indicates, the reported returns in much of the literature — though variable — are high on average.

|  |  |  |  |
| --- | --- | --- | --- |
| **Researchers** | **Period investigated** | **Details** | **Results** |
| Scobie *et. al.* 1991 | Prior to 1990s | Returns to research expenditure in the Australian wool industry | Average national IRR of 9.5%. IRR to woolgrowers of 25% |
| Mullen and Cox 1995 | 1953-1988 | Returns to public research expenditure in Australian broadacre agriculture. | Returns between 15% (35 year research lag) and 40% (16 year research lag) |
| Mullen and Strappazzon 1996 | 1953-1994 | Returns to public investment in Australian broadacre agriculture research. | Returns between 18% (35 year research lag) and 39% (16 year research lag) p.a. |
| Cox *et. al.* 1997 | 1953 - 1994 | Returns to public investment in Australian broadacre agriculture research. | Marginal IRR to research and extension expenditure of 12-20% |
| Alston *et. al* 2000 | 1953 - 2000 | Meta-Analysis of reported rates of return to agricultural R&D investment for 292 studies published internationally. | Median return of 48.0% p.a. for research, 62.9% p.a. for extension, and 37% p.a. for returns to research and extension combined. |
| Shanks and Zheng 2006  (Productivity Comm.) | 1970s - 2004 | Rates of return to public R&D investment in Australian agriculture. | 24% - 32% rate of return p.a. depending on assumptions. |
| Wang (2006) | 1953 - 2003 | Returns to public investment in Australian broadacre agriculture research. | IRR of 11% to 35% per annum |
| Mullen, 2007 | 1918-2003 | Rates of return to Australian research and extension expenditure under different scenarios. | IRRs of between 14 and 17% |

It was also re-examined by the Cutler Review (Cutler 2008), initiated by the Australian government. That review revisited the case for government intervention to increase investment in R&D (in all sectors of the economy), and concluded that such policies remain as valid at present as they have been in the past.

In responding to the review, the Australian government (Carr 2009) expressed strong support for

Government intervention to increase the level of Australian investment in R&D. The Minister noted;

*Australia’s recent innovation performance has been uneven, and we have failed to keep pace with the rest of the world. In the last eight years, Australia has slipped from fifth to eighteenth in the World Economic Forum’s Global Competitiveness Index. Our multi-factor productivity grew 1.4 per cent a year on average between 1982–83 and 1995–96. Growth has averaged only 0.9 per cent a year since then, which is no better than we achieved in the 1960s. Since 2003–04, our productivity has actually declined. The reasons for this are not hard to find. Commonwealth spending on science and innovation has fallen 22 per cent as a share of GDP since 1993–94. Business spending on research and development collapsed in the late 1990s, and while it has grown since then, we still lag many of the countries we compete with. The proportion of Australian firms introducing innovations has been stuck at one in three for years. A decade of policy neglect has hurt Australia’s innovation performance, making us less productive and competitive, and reducing our ability to meet the needs and aspirations of Australian families and communities.*

Another key reason why such tax incentives should remain is because, prima facie, there has been a slowing in underlying productivity growth in Australia’s broadacre rural industries since the mid-1990s with this outcome at least partly attributed to a decline in public investment in rural R&D (see the following two graphs).

**Agricultural productivity decline over time**



Source: ABARES, Australian Commodity Statistics 2013

In fact, New Zealand is now the only developed nation with a lower level of government support for its agriculture sector than Australia, and a number of developing nations that are major competitors for Australian farmers are also estimated to receive similar or higher levels of government support.

**Decline in Government investment in rural R&D**



Source: Mullen 2010

In short, all available evidence provides strong support for continued government support of rural R&D, because of the substantial positive externalities or spill overs that are generated. Industry spill overs are a major reason why R&D investment in the sector will not be adequate, in the absence of government intervention.

Notably, it is ALFA’s view that without the Government R&D tax incentive, such investment would either not occur or be considerably constrained. The reasons why this is the case is as follows:

1. **Australian farm businesses are dominated by small family owned business which are generally unable to afford to invest in R&D unless incentives are provided.**

The rural sector in Australia consists primarily of small businesses with the cattle feedlot sector no exception with around 98% owned by families. The average total cash receipts for all broadacre farms with output in excess of $40,000 per annum in 2013 was $427,000, and less than 5% of all businesses had gross output in excess of $1 million.

Given the relatively low rates of return of these businesses, and the fact that it is difficult to capture (through intellectual property ownership or branding) the benefits of successful research), there is little or no realistic opportunity for most of these businesses to invest in R&D to the extent and for the length of time that it would normally require to generate returns on that investment. This applies in particular to more basic research, but given costs and timeframes involved, even to research associated with near-commercial innovations.

In the case of agriculture, the processes being researched are largely biological, are difficult to secure intellectual property rights over, and many of the inputs into production systems are highly variable and subject to constant change. This dictates that there is an even greater need to provide incentives or to support R&D than is the case in the rest of the economy.

Given the small average business size in agriculture, there is in fact strong argument to suggest that the current $20,000 R&D investment eligibility threshold should in fact be reduced.

1. **The risks and time-lags associated with R&D investment make such investment unviable for many businesses, unless incentives are provided.**

Agricultural R&D investment invariably involves a high level of risk. There are also typically extended time-lags between a novel discovery, its development to a commercial stage, and its subsequent adoption in rural production and the generation of a return on the R&D investment. For small businesses operating on narrow margins, or even for large businesses operating in a globally-small market such as Australia, the risks and time-lags associated with R&D investment are undoubtedly a major disincentive, and mean that there will be under-investment in rural R&D in the absence of strong incentives.

Various estimates have been made of the time function associated with successful rural R&D, although most of these consider adoption rates, and do not encompass the full length of the cycle from basic research to commercialisation and adoption. Research into the time-lags and risks associated with rural R&D has been carried out by US researchers, using the rich supply of data available from rural research activities over many decades in the USA. One group of US researchers noted;

“*Many researchers underestimate the time lags between initial research investment and ultimate economic impacts. Research takes a long time to affect production, and then it affects production for a long time. The dynamic structure linking research spending and productivity involves a confluence of processes—including the creation and destruction of knowledge stocks and the adoption and disadoption of innovations over space and time—each of which has its own complex dynamics. That science is a cumulative process, in which today’s new ideas are derived from the accumulated stock of past ideas, influences the nature of the research-productivity relationship as well. It makes the creation of knowledge unlike other production processes.”*(Alston, Pardy and Ruttan, 2008)

In conclusion, ALFA believes that the Government should continue to support the private R&D tax incentive given the industry and community benefits and the fact that R&D undertaken by businesses would be considerably constrained should the policy be removed.