



**Australian Government**  
**Rural Industries Research and  
Development Corporation**

# Deer Industry R&D Plan

2006 – 2011



**RIRDC** Shaping the future



**Australian Government**  

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Development Corporation**

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**2006 to 2011**

**Rural Industries Research and Development  
Corporation**

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# Foreword

Five Year Research and Development (R&D) Plans are developed for each of RIRDC's major programs.

The 2006-2011 Deer R&D Plan is the third Five Year Plan developed by the Australian deer industry and the Australian Government and identifies key objectives for R&D investment. Associated with each objective is a set of strategies to be followed in pursuing each objective and a set of performance indicators to give guidance as to how the program can be assessed as it progresses. An indicative share of the R&D budget has also been proposed for each plan objective in order to guide investment priorities.

Preparation of the R&D Plan occurred partly in parallel with a comprehensive review of the Australian venison industry, and the development of an industry endorsed Strategic Plan for venison production, processing and marketing under a RIRDC funded project US-130A "An Industry Endorsed Strategic Plan for the Australian Venison Industry" (Cox, Watson & McRae, 2005). It was also developed as a result of consultation with the industry and through a workshop of deer industry participants held in Melbourne in early 2006.

The R&D Plan reflects the state of the industry in 2006 as it recovers from drought, low commodity prices and some industry restructuring. The industry's goal is to become a profitable and sustainable food industry with efficient vertically integrated supply chains, effective marketing for a range of internationally competitive products and skilled human resources. This will be achieved through the organisation funding and management of a research, development and extension program that is both market focussed and stakeholder driven.

In April 2006, the Deer Industry Association of Australia (DIAA) applied for additional industry development funding under the Australian Government's Industry Partnership Program (IPP) to further the industry's R&D program. The Minister for Agriculture, Fisheries and Forestry, the Hon. Peter McGauran MP, announced in June 2006 that the Government would provide \$350,000 to the DIAA for this purpose. This additional IPP funding will allow rapid implementation of this R&D plan, and, in particular, will allow the industry to support market development activities included in the Venison Supply Chain Alliances, which are critical to industry growth. All market related activities will be managed by Department of Agriculture, Fisheries and Forestry on behalf of the DIAA. The joint funding arrangement, including how the IPP funding will be managed, is outlined in this Five Year Plan.

This Plan is consistent with the RIRDC Corporate Plan (2003-2008) and the Australian Government Rural Research Priorities. The R&D Plan will be implemented in accordance with the provisions of the *Primary Industries and Energy Research and Development Act 1989*.

This R&D Plan is an addition to RIRDC's diverse range of over 1500 publications and forms part of our Deer R&D Program which aims to assist in developing the Australian deer industry.

**Peter O'Brien**

Managing Director  
Rural Industries Research and Development Corporation  
Committee

**Nola Anderson**

Chairperson  
Deer R&D Advisory

# Abbreviations

ADH&CP	Australian Deer Horn and Co-Products
DAFF	Department of Agriculture, Fisheries and Forestry
DIAA	Deer Industry Association of Australia
DIC	Deer Industry Company
DINZ	Deer Industry New Zealand
IPP	Industry Partnerships Program
NVAS	National Velvet Accreditation Scheme
RIRDC	Rural Industries Research and Development Corporation
SWOT	Strengths, Weaknesses, Opportunities and Threats

## Acknowledgements

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- Nola Anderson, Chair, Deer Industry Research and Development Advisory Committee
- Jim Moir, President, Deer Industry Association of Australia
- Rod Cox and Geoff Watson, Charles Sturt University, Orange
- Solange Shapiro, Secretary, Deer Industry Association of Australia
- Chris Tuckwell (author of the previous Five- Year Plan)

# Snapshot of the Five Year Plan

## Goal

The Deer Industry's goal is to be a profitable and sustainable food industry, with efficient vertically integrated supply chains, skilled human resources and effective marketing for a range of internationally competitive products. This will be achieved through the organisation, funding and management of a research, development and extension program that is both market focussed and stakeholder driven.

## Objectives

(an indicative allocation of resources is given in brackets)

The Deer Industry's Research and Development (R&D) Plan for 2006 to 2011 is directed towards improving industry performance in four key areas where the industry has identified problems at both whole-of-industry and industry sector-specific levels. Improvement is sought in:

- Efficiency, profitability and sustainability of deer farm production (15%);
- Supply chain efficiency, quality management and value adding (59%);
- Market access and marketing arrangements (22%);
- Human capital formation, industry organisation and communications (4%).

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# 1. Purpose of the Plan

The purpose of this Five Year Plan is to:

- outline the rationale for the Deer Research and Development (R&D) Program that RIRDC will manage, in conjunction with the Deer Industry Association of Australia (DIAA), on behalf of the Australian Government and the Australian deer industry;
- indicate the specific role that RIRDC funded R&D will play in expanding the knowledge base of the industry and improving its profitability and sustainability over the next five years;
- provide clear signals to the deer industry and the research community concerning deer industry R&D needs and priorities for the period 2006 to 2011;
- outline the broad priorities that RIRDC will pursue through its investment in the program over the next five years, taking account of national research priorities and RIRDC corporate policies;
- encourage collaboration and coordination in future deer industry R&D, including new joint investment, where this is appropriate;
- encourage and support discussion between the deer industry, RIRDC and the research, development and extension community that will enable the future needs of the industry to be identified and incorporated in annual and longer term planning.

This Five Year Plan reflects a major change in the direction of the deer industry's R&D activities in 2005/06. Following extensive consultation with industry participants, a Strategic Plan for venison was endorsed in 2005. This led to significant changes in focus for the RIRDC Deer R&D Program, with the most important of these being support for the establishment of Market Focused Venison Supply Chain Alliances.

The R&D Plan is based on consultation with industry via a workshop of industry participants held in Melbourne in early 2006. Venison and velvet producers and processors, owners of abattoirs that currently slaughter deer, the major industry representative organisation (Deer Industry Association of Australia -DIAA), and members of the RIRDC Deer Industry R&D Advisory Committee participated in this workshop. The DIAA and the Advisory Committee have considered the draft R&D Plan, which has been refined following feedback received. The Plan should be regarded as a living document that will be updated as changing circumstances in the industry require.

As participants in an export focussed industry, deer farmers face cyclical and often unstable trading conditions. This has driven the deer industry towards the commodity approach to production and marketing of deer products. In this approach, industry participants compete for market and profit share within a price framework determined outside the supply chain, but with export market prices controlling decisions about future production levels. Under these production and marketing arrangements there are few incentives for deer farmers to adopt technology or management practices that improve product standards.

Accordingly, the bulk of product available to downstream processors in the supply chain is usually below the quality required in markets that provide price premiums. In the highly competitive part of the world venison market where quality is valued, the commodity supplier is a "supplier of last resort".



To progress beyond this “price-taking” approach to venison and velvet marketing and improve the international competitiveness of the Australian deer industry, all sectors of the industry - producers, processors, marketers and providers of the industry’s R&D support - must work together to improve the focus of all sectors in the supply chain, including deer farmers, on end market requirements.

This can only be achieved by supply chain arrangements that facilitate the recognition of value according to end market requirements at all stages in the supply chain. Sustainable development of the industry is dependent on improving the incentives available to participants in the supply chain for reliable supply of consistent quality products.

This Five Year Plan is heavily focussed on stimulating and supporting the R&D initiatives that are necessary for the deer industry to achieve this change from a commodity focus to an end market focus.

## 2. The Deer R&D Program

Under the *Primary Industries and Energy Research and Development (PIERD) Act 1989*, Australian deer farmer levies are matched on a dollar for dollar basis by the Australian Government, up to a maximum of 0.05% of the Gross Value of Production (GVP) for the industry.

At this stage in the industry's development, it has a relatively modest GVP (approximately \$A5 million per annum) in comparison to other red meat industries. As a result, the Deer R&D Program is currently funded mainly from producer levies. This R&D program is facilitated and managed by RIRDC, which contributes an additional \$52,000 per annum to the program from RIRDC core funds.

Compulsory levies on deer products were introduced in the 1980's by the Australian Government at the request of the main deer farmer representative organisation, the Deer Industry Association of Australia (DIAA). Initially, the levies were struck at a high rate, relative to those of other comparable industries, to create sufficient funds for the emerging industry to develop an effective R&D program. A reduction in levy charges has been proposed by the industry (DIAA) including reduced rates for the slaughter levy, the export charge on live deer, the velvet levy and the velvet export charge, although the R&D levies for deer remain at that are levels well above those of other industries.

- Slaughter Levy - reduced from 10.5 cents to 8 cents per kilogram carcass weight;
- Export Charge (on live deer) - reduced from \$7.75 to \$5.00 a head;
- Velvet Levy - reduced from 3.5 per cent to 2 per cent of the sale value; and
- Velvet Export Charge - reduced from 3.5 per cent to 2 per cent of the declared value.

In this Deer R&D program, projects consistent with R&D priorities identified in the industry's Five Year Plan were conducted by a range of bodies including universities, Departments of Primary Industry and other research institutes, usually with joint funding. The Deer Industry Company, a corporation established by the DIAA to undertake applied R&D work for the industry, has also been a key R&D contractor over the last decade. R&D funding is targeted at all parts of the venison and velvet value chains, from deer breeding through carcass processing to end product packaging and marketing development. Projects are conducted over a wide range of categories from basic biomedical research on the pharmacological properties of velvet antler, through to training deer farmers in live animal condition scoring, and export market research.

Project funding is guided by the RIRDC Deer Industry R&D Advisory Committee according to the directions established by the industry in its Five Year Plans.

## **The Deer Industry R&D Advisory Committee (DIRADAC)**

The RIRDC Deer Industry R&D Advisory Committee comprises:

- The Chair (appointed by the RIRDC Board after consideration of advice from the DIAA);
- Two deer farmers nominated by the DIAA; and
- Two independent technical experts nominated by the DIAA.

Through the RIRDC Deer Program Manager, the Committee reports annually to the DIAA on the R&D program. These meetings provide an opportunity for deer producers to raise any concerns that need to be considered in both annual and longer term R&D planning.

# 3. Industry Profile

## Location

Deer farms are found throughout all Australian states, but production is now concentrated in Victoria, South Australia, New South Wales and Tasmania. There has been a significant decline in deer production across Australia, but particularly in Queensland and Western Australia.

## Industry Features

Deer are not indigenous to Australia. They were introduced into Australia during the nineteenth century programs governing the introduction of exotic (non native) species of animals and birds into Australia. Many introduced species of deer were released at various locations. The animals dispersed and six of the introduced species established wild populations at various locations across Australia, mostly close to the points of their release into the wild. These wild herds formed the basis for establishment of the deer industry in Australia.

Commercial deer farming in Australia commenced in Victoria in 1971 with the authorised capture of Rusa Deer from the Royal National Park, NSW. Until 1985, only four species of deer, two from temperate climates (Red and Fallow Deer) and two tropical species (Rusa and Chital Deer) were confined for commercial farming. Late in 1985, pressure from industry to increase herd numbers saw the development of import protocols and in turn, the introduction of large numbers of Red Deer and Red Deer/North American Elk (Wapiti) hybrids from New Zealand, and North American Elk (Wapiti) from Canada.

Statistics suggest that in 1997-98 there were about 190,000 farmed deer in Australia - Fallow Deer comprised about 49%; Red Deer (including red hybrids) comprise about 39%, Elk/Wapiti about 3%, Chital about 2.5% and Rusa 6.5% of the total farmed deer population. The national herd increased until the onset of drought in 2002, but has declined significantly since that time and is now estimated to be about 150,000 head in 2005. Over this period Red Deer and Red Deer hybrids became the predominant species on Australian deer farms as they are a dual purpose animal, having better production of velvet antler and a larger carcass size (for the venison) which reduces slaughter and processing costs .

The number of animals processed annually has continued to increase, despite the downward trend in venison prices. Of concern is the apparent increase in the number of female animals processed in recent years (which may suggest that the industry's production capacity is being reduced) and the number of 'whole herds' committed for processing. There is concern that future years may see a major drop in production.

Average venison prices (weighted to consider variations of price paid relative to hot carcass weight and less the industry levy) did improve from an industry low of approximately \$1.60/kg hot carcass weight in June 1999, but fell again in 2002 and 2003 as a large number of drought affected stock were slaughtered. Prices for animals meeting market specifications improved in late 2005, with processors paying in excess of \$2.50/kg hot carcass weight for prime animals. By mid-2006 this price had increased to \$3.10 and up to \$4/kg hot carcass weight for prime animals in the optimal carcass weight range.

Prices (weighted to consider variations in price paid for different grades within and between species) for velvet antler were similarly depressed in historic terms over the last five years. Recovery from a previous downturn for velvet occurred in 1999 when average prices exceeded \$100/kg for top grade velvet, but then fell again to around \$45/kg in 2006. However, an interesting trend in 2006 was the \$75/kg price achieved for “second-cut” velvet regrowth which had previously attracted low prices, possibly signalling a major shift in the velvet market following scientific evidence of increased bioactivity in the growing antler tips.

Quality consistency in velvet remains an issue for the industry although the National Velvet Accreditation Scheme, established by the industry in consultation with state Veterinary Boards and the Australian Veterinary Association, continues to have a positive effect on quality that in turn has a positive effect on price paid to growers. In addition to a significant volume of velvet sold in private treaty trading, the industry conducts two annual pool sales for velvet through a non profit marketing company established for this purpose by the DIAA.

The industry has embarked on a Quality Assurance program that is slowly growing, in an effort to increase client confidence in the commodities it produces and to guarantee international market access for those commodities.

In 2006, the industry is emerging from a period of restructuring precipitated by the drought and low commodity prices. Many former deer farmers, particularly those with smaller enterprises, exited from the industry over the last three years. There are however, a significant number of larger, more efficient producers remaining. Some of these deer farmers have more than 1,000 animals and report an acceptable rate of return from their enterprises when assessed over a number of years. Some of these farmers derive their entire income from the deer industry. Whilst their enterprises provide strong evidence of the viability of deer farming in the future, at a wider industry level and particularly amongst smaller producers there has been considerable dissatisfaction and pessimism about the future.

In 2005, the estimated farmed deer population in Australia was around 150,000 head. In 2000-01, 1,680 tonnes of venison was processed – representing 50,000 animals slaughtered. Estimated velvet antler production in 2001-02 was 27.8 tonnes.

Over 90% of venison production is currently exported, predominantly to the European Union and South-East Asia, with velvet exported to Korea, Hong Kong and China. The total gross value of deer production (GVP) at the farm gate in 2000-01 was \$7.6 million and the estimated GVP for 2001-02 was \$5.5 million (Department of Agriculture, Fisheries and Forestry).

The industry is characterised by a large number of small scale producers, although there are now many deer farmers with more than 1,000 animals. Since the industry was established in Australia in the 1970's, it has experienced the cyclical “boom or bust” phenomena of most export commodity driven industries.

The Australian deer industry struggles to be internationally competitive against strong global competition from a much larger deer industry in New Zealand where deer farming is a mainstream farm industry. In 2004-05, the New Zealand deer industry earned \$NZ263 million in export revenue. This was derived from the 762,427 deer slaughtered from which 27,319 tonnes of venison worth \$NZ213 million was exported, in addition to 260 tonnes (dried equivalent weight) or about 780 tonnes (unprocessed weight) of velvet worth \$NZ24 million.

The only inherent competitive advantages that the New Zealand industry has over the Australian industry are scale and the capacity to use statutory producer levies for product promotion in venison markets - including the Australian domestic market. In other respects the two industries are alike – with similar production systems and processing facilities and access to the same markets.

## **Industry Structures**

From the formation of the Australian Deer Breeders Federation in 1979, the industry representative body has evolved through the Deer Farmers Federation of Australia to the Deer Industry Association of Australia Ltd (DIAA), which was registered in 1995.

The DIAA represents all sectors of the Australian industry and members subscribe directly or through state branches, breed societies or processing associations. The DIAA has established two product development and marketing companies, the Australian Deer Horn and Co Products Pty Ltd (ADH&CP) and the Deer Industry Projects and Development Pty Ltd, which trades as the Deer Industry Company (DIC).

ADH&CP collects, grades and markets Australian deer velvet and co-products on behalf of Australian deer farmers. It promotes the harvest of velvet antler according to the strict Quality Assurance (QA) program promoted by the industry. The company also co-ordinates regular velvet accreditation courses for deer farmers.

## **Industry Development**

With the development of strong overseas markets for venison (RIRDC funded venison market development project) and velvet (Australian Deer Horn and Co Products Pty Ltd) and prospect of better seasons ahead, a more positive market trend has developed since 2005. However, the current supply of venison products has been limited by the slaughter of young breeding females during the drought.

The relatively small size of the Australian farmed deer herd imposes some constraint on the rate at which herd numbers can be expanded to meet demands for its products. Against its NZ competitors, the Australian industry struggled to achieve economies of scale, particularly in processing. New Zealand has the capacity to quickly meet any increasing domestic demand for venison whereas expansion of supply by Australian deer farmers can take several years. Industry estimates suggest that until the early 1990's the rate of annual increase in the number of farmed deer was up to 25%, but after 1993 this rate of increase fell to less than 10%. The main reasons for this decline at such a critical time in industry development were: (i) severe drought in 2001-2003 affecting Eastern Australia again following the 1993-94 drought, (ii) a dramatic drop in international returns for venison in 2003 and (iii) a significant decline in velvet antler returns, which all contributed to (iv) a significant decrease in confidence within the industry. This drop in confidence led to the slaughter of large numbers of breeding females, at very low prices. Lack of confidence also led to a drop in new investment within the industry and a lack of willingness of established farmers to expand their herds.

## Research and Development

Industry research and development programs are funded by statutory levies on the sale of animals for venison, velvet antler and live animals for export. The bulk of funds are collected from levies on deer slaughter (venison). In the past, RIRDC has funded projects in animal nutrition, disease control, pasture improvement, carcass quality, antler harvesting and the development of promotional material. All have generated a significant volume of research information, which complements similar research undertaken in New Zealand and other deer farming countries.

Major projects funded by levy funds include the Venison Market Development project undertaken from 1992 to 1996, which resulted in a dramatic increase in international demand for Australian venison and, later, in an increase in the domestic consumption of venison. However, when export prices improved in the late 1990's, funding of market development activities in the domestic market ceased. What had become a strong domestic market with RIRDC support was lost when the limited volumes of Australian venison were diverted to better paying export markets. The rapid increase in exports of venison was, however, accomplished at the expense of maintaining the size of the national herd, (depletion of female stock through slaughter for venison and live exports).

When export prices fell again, a significant proportion of the Australian domestic market was captured by New Zealand producers seeking market opportunities for venison previously sold in Europe.

In an effort to maintain existing venison markets in the short term and to increase them in the long term, the industry's top priority became the increase in size and production capacity of the national herd. However, since 1997, the decline in farm gate returns has significantly reduced industry confidence, with an increasing number of small producers leaving the industry and decreasing interest in new industry investment.

The annual budget allocated for deer industry research during the 1996-2005 period under the RIRDC Deer Industry Research and Development Program ranged from \$100,000 to \$350,000. Although most of this funding was obtained from the deer slaughter levy, the current contribution of velvet antler levies to total levies receipts has increased due to the growing number of large specialist velvet producers.

Industry stakeholders recognise the greater contribution of velvet antler levies to R&D funds and this Plan reflects industry support for a reasonable allocation of R&D resources between the Industry's major commodities.

In 2006, the industry is again seeking a reduction in levies. In any analysis of the impact of such a reduction it is important to consider:

- (i) future production forecasts (and hence predicted levy revenue);
- (ii) industry expectations of its research and development programs; and
- (iii) the availability of other research funds to meet the industry's Research and Development expectations.

## Markets

In farm gate value terms, more than 80% of the deer products produced in Australia are exported. With some exceptions, export success and global competitiveness have been undermined by the commodity approach to export marketing. The major export markets for Australian venison are in the European Union (especially Germany) and South East Asia. The major markets for velvet are in Asia. The New Zealand industry also supplies these markets and has developed strong venison markets in the USA and North Asia.

Australia imports a significant volume of venison from New Zealand (in excess of 1,000 tonnes per annum in recent years) and New Zealand increased its share of the Australian domestic venison market as production of quality Australian venison declined during the drought. Development of the domestic market is problematic for the Australian industry due to this dominance of the New Zealand industry.

The international venison market is complicated and volatile, distorted by tariffs in many countries including the United States, Japan, Korea and the European Union. Australian deer farmers however, receive no direct Government assistance other than the matching grants for industry research and development programs up to 0.05% of GVP and RIRDC's current core contribution of \$52,000.

## Industry Success and Outlook

The majority (at least 80%) of commodities currently produced by the Australian deer industry are sold in export markets. This makes the industry especially vulnerable to international market forces over which it has no control (international exchange rates, international import requirements etc) and to international competition from the world's largest deer farming industry in New Zealand.

Historically, the Australian industry appears to have performed best when its export activities are underpinned by a strong domestic market and less well when it has concentrated exclusively on exports. Competition from New Zealand venison however, also is a major factor in the Australian domestic market.

Development of an internationally competitive deer industry in Australia was initially dependent on the development of efficient farm production systems and RIRDC has supported production research in the deer industry for many years. As a result, the industry now has available the solutions to its most significant on-farm problems and to most technical problems in product processing. The knowledge required for farmers and processors to consistently produce high quality venison and velvet antler products is available and much of this is incorporated into a well developed quality assurance program.

To facilitate the adoption of the available knowledge from research, RIRDC has supported extension and communication of practical messages to industry. RIRDC has also funded a number of market analysis and market development programs for the deer industry.

Despite solutions to most of the industry's production problems, profitability of deer farming over the last few years has not been sufficient to drive industry expansion. Despite evidence of strong demand for the industry's higher quality products in high value markets, both export and domestic, the industry has not established the capacity to meet the requirements of these higher value markets in areas of product consistency and reliability of supply. The industry continues



to sell most of its products in commodity markets where prices on offer do not support profitable deer production in Australia.

In 2004, RIRDC commissioned a major project to improve the industry's understanding of the impediments to its expansion. This project identified several significant issues in supply chain organisation as the principal limiting constraints to industry expansion.

The recommendations from the review were incorporated into a Strategic Plan, which was strongly endorsed by the industry in December 2005. The recommendations of this report underpin this Five-Year R&D Plan.

## **Current Situation**

The Australian venison industry is currently in an extended slump, characterised by low returns to producers and a declining number of large-scale deer farmers. Of major concern to the industry at present is the fact that whilst venison supplies and production are at historically low levels, prices being received for deer are also at historically low levels – a situation that indicates the existence of significant demand and supply chain related issues. This being said, the effect of the downturn in Australian venison export markets also needs to be taken into consideration.

The current trend of decreased production and decreased prices for the Australian venison industry is in complete contrast to other competing meat industries, where reduced production levels have resulted in historically high prices in recent years. The competing meat industries such as beef, lamb and pork have experienced significant growth in demand despite higher retail prices - largely a result of targeted, consumer focussed market campaigns. While it is acknowledged that the Australian venison industry does not have the financial or production capacity to match the marketing initiatives of larger industries, it is of significant concern that venison has not capitalised on the growth in demand for meat products in recent years.

Also of great concern is the rapid reduction in the number of viable farmers within the industry. Indeed, the numerous interviews and surveys undertaken with industry participants by researchers have suggested that many producers within the industry are looking to exit production and are simply waiting for the best time to sell stock and “cash-out” of the industry. Thus, if returns for deer were to rise in the near future, the action of producers would need to be closely monitored as any further reduction in the domestic herd or number of producers could further harm the future of the industry. This situation has been a serious consideration in the development of the industry endorsed Strategic Plan, with many of the strategic initiatives aimed at producing slow, medium to long-term growth - as opposed to a short-term boom that could ultimately have a negative effect upon the industry's future.

Without a significant change in supply chain management, the current situation facing the Australian venison industry is bleak. Producers are discouraged by low returns, with many either having exited or planning to exit the industry. Furthermore, there are only a limited number of processors remaining in the industry and these are burdened with high infrastructure costs. Demand for venison in the domestic market is very limited with strong competition in the food service sector from imported New Zealand venison. Australian consumers remain relatively uneducated about the benefits of venison as an alternative meat product.

## Key issues or problems for the Industry

Through the research undertaken by Cox, Watson and McRae (2005) into the Australian venison industry, it has become evident that there are several key issues or problems that need to be addressed.

Through reflection and industry consultation, the researchers have identified five key problems for the Australian Venison Industry. These problems are:

1. Declining economic viability of the Australian Venison Industry in the domestic market – including high infrastructure and slaughter charges, the low number of viable participants in the industry and low deer prices received by producers.
2. Lack of consumer awareness of venison in the domestic market across all sectors. Contributing to the lack of awareness of venison in the domestic market is the absence of a researched Venison Marketing Plan for the industry.
3. Underutilisation of the deer carcass – particularly for secondary cuts and by-products.
4. Lack of suitable product specifications and feedback to enhance demand throughout the whole venison production chain – including inconsistency in product presented, very little feed forward information and no consistently applied grading system.
5. Competition from NZ at the high quality end of the food service market, particularly in the leading markets of Sydney and Brisbane. New Zealand venison's consistency and quality are perceived to be above that of the Australian product.

# 4. Key Challenges for the Industry (SWOT)

## Strengths of the industry

From the extensive consultation carried out with the Australian Venison Industry, there exist numerous strengths identified for the industry that will help it reach its key challenge. While not all the strengths for the industry are listed below, the main strengths include:

- *Desire to change* – there is an acceptance emerging within the industry that change needs to occur. This acceptance also comes from a general acknowledgement of what will happen to the industry if change does not occur.
- *Well positioned in the foodservice sector* – Operators involved in the foodservice industry typically perceive venison as a premium product. This is a position that many other competing meat products are trying to achieve.
- *Eating quality and health attributes* – Moffat’s (2005) research indicates that venison has taste attributes that are highly attractive to important consumer segments such as women and that venison can outscore high quality beef in terms of eating quality. In terms of health attributes, Moffat (2005) states “Venison potential is enhanced by the very favourable feedback on its health features”. Venison’s healthy attributes are certainly strengths for the industry in achieving its key challenges and are something that can be used to increase demand.

## Weaknesses of the industry

- *Lack of supply* – if the Australian venison industry was to experience a sharp increase in demand, the industry currently does not have the supply capacity to capitalise on this opportunity.
- *Lack of funds* – the limited funds that the Australian Venison Industry has at its disposal to achieve the key challenges highlighted in this Strategic Plan is a weakness for the industry. While more funds would not necessarily create an improved Strategic Plan for the industry, the small amount of funds the industry has available has limited the scope of the strategic options that can be feasibly considered in this research.
- *Product not meeting specifications* – it is a weakness for the industry that considerable amounts of product right through the production chain fail to meet the specifications desired. Moffat (2005) reinforces this weakness in the survey results from chefs and the food service industry by noting “*The product’s failure to deliver consistent satisfaction in terms of quality and price as the major impediment to increasing commercial usage*”.
- *Consumer awareness of venison* – the very low consumer awareness of venison is a major weakness for the Australian venison industry to overcome. Growth in demand will need to be managed if supply is to be maintained.
- *Existing perceptions of potential consumers to venison* – venison is widely perceived as a strong, gamey meat. This image appeals to a very narrow market segment and does not align with the actual eating experience of potential consumers who took part in the market research conducted by Moffat (2005). Repositioning venison will require a quantum shift in existing perceptions of the product to align with key attributes identified in the market research.
- *Lack of viable producers* – a significant weakness for the Australian venison industry is the lack of viable producers existing in the industry. As highlighted by Cox, Watson and McRae (2005), the number of deer farmers with an estimated value of agricultural

output over A\$22,500 has fallen significantly, down from approximately 400 producers in the mid 1990's, to less than 50 in 2002-03.

- Industry cohesion – a lack of industry cohesion will be a big threat to the strategic directions being considered. While the industry acknowledges the need for change it will be crucial for the industry to be cohesive for these changes to occur. Previous consultation with the industry has shown cohesiveness and cooperation within the industry can be difficult to achieve and maintain.

## Opportunities for the industry

- Consumer education – given the low consumer awareness of venison in the domestic market, there is a significant opportunity for the industry to educate consumers about the positive attributes associated with venison. Moffat (2005) highlights this opportunity by stating “*The foundation of a marketing plan (for the Australian Venison Industry) should be to support and communicate a new image for venison that reflects key attributes and differentiating features identified in the research*”
- Alternative markets to be targeted – there is an opportunity for the Australian venison market to research and target alternative markets. Moffat (2005) highlights that there are a number of potential target markets for the industry including:
  - Top end restaurants;
  - Commercial catering facilities that service international or top end clients;
  - Cultural groups receptive to the product such as German communities;
  - Restaurants and cultural groups with particular requirements, such as Muslims for halal;
  - Health conscious consumers;
  - Special occasion eat at home; and
  - Frequent restaurant goers.
- Use of cheaper secondary cuts – while venison is seen as a premium product the significant and broad appeal of the health features indicates potential for creating new markets using cheaper cuts for use in mid level restaurants and homes.

## Threats to the industry

- New Zealand venison's current standing and positive reputation in the Australian food service industry for delivering consistent, high quality product, poses a major threat for Australian produced venison. There would be a considerable threat to the Australian industry if New Zealand decided to increase their emphasis on the Australian market.
- Poor first impression to consumers – there is a real threat to the Australian Venison Industry that upon trying venison for the first time, consumers will depart with a poor first impression of the product. This first impression will be very difficult to overcome and will harm demand substantially. If a consumer doesn't have a good first experience of venison they may be “lost” forever.
- Time frame for recovery – there is a real threat that changes may not take place quickly enough for improvement to be successful. It has been acknowledged by many respondents that the industry is “on its last legs” with a concern that major changes need to be made in the short term to provide a boost to the industry.
- Downturn in export demand - With the majority of Australian venison being exported, any downturn in demand for venison from export markets will be a major threat to the Australian Venison Industry. Increasing this threat is the possible scenario that a reduction in demand from the export market (particularly in Europe) could see increased amounts of New Zealand venison imported into Australia as New Zealand exporters look for alternative markets.

# 5. The Current Deer R&D Program

## Cox, Watson and McRae (2005)

The review of the current RIRDC Deer R&D Program by Cox, Watson and McRae (2005) reveals the following lessons:

- The Deer R&D Program has been dominated by research in which success was intended to result in an increasing supply of deer products.
- Little thought was given to the management of demand.
- Whilst RIRDC research resulted in identification of the product parameters that define “quality” in established markets, producer adoption of practices necessary to deliver quality has been low because these practices usually increase costs, but have not to date attracted price premiums.
- Further research to improve product quality or production efficiency is less desirable unless accompanied by changes in supply chain organisation that provide mechanisms to support the adoption of the research results.

## RIRDC Cost-Benefit Analysis of the Deer Industry (1998)

Apart from the extensive qualitative review of the Deer Program by Cox, Watson and McRae (2005), the last RIRDC review of the program was documented by the Centre for International Economics in 1998. Based on a review of four projects relating to animal health and nutrition, it was found that the likely benefit-cost ratio of the deer R&D program was 2:1.

## 6. External Priorities and R&D Priorities in Other Industries

The priorities for the RIRDC Deer R&D Plan 2006 to 2011 need to be set against knowledge of:

- The broader national R&D agenda including Australian Government National Research Priorities, Australian Government Rural Research Priorities and RIRDC Corporate Goals.
- National research trends – CSIRO National Research Flagships Program and research in other red meat industries by Meat and Livestock Australia.
- International deer research trends, particularly in New Zealand.
- The Industry Partnerships Program (IPP) established by the Australian Government's Department of Agriculture, Fisheries and Forestry (DAFF).

### National Priorities and Rural Research Priorities

Australian Government National Research Priorities as outlined by the Prime Minister on 5 December 2002 are:

- An environmentally sustainable Australia;
- Promoting and maintaining good health;
- Frontier technologies for building and transforming Australian industries; and
- Safeguarding Australia.

The Australian Government Priorities for Rural Research are:

- *Sustainable natural resource management* – water as a critical resource, transforming existing industries to ensure their sustainability, overcoming soil loss, acidity and salinity, and sustainable use of Australia's biodiversity are all key goals for this priority.
- *Improving competitiveness through a whole of industry approach* – agricultural industries export the majority of their produce and face intense global competition. To be successful, industry must focus on meeting the needs of increasingly sophisticated and demanding consumers, while at the same time coping with often distorted markets for their products. This demands a whole-of-industry approach to the value chain.
- *Maintaining and improving confidence in the integrity of Australian agricultural, food, fish and forestry products* – Research and Development Corporations (RDCs) must provide leadership on food supply chain policies and food regulation reform to ensure that rational, evidence-based policies are developed.
- *Improved trade and market access* - the rural sector is highly dependent on access to international markets and to the prices received on those markets. These markets are often difficult to penetrate because they are distorted by protection. However, there are opportunities available for the removal of protection, through various bilateral and multilateral trade forums.
- *Use of frontier technologies* - new technologies, particularly biotechnology and genomics, have the potential to significantly contribute to the sustainability and profitability of Australian agriculture.

- *Protecting Australia from invasive diseases and pests* - protecting Australia's animal, plant and human health status through effective national quarantine arrangements is a key challenge. As our approach affects our relationship with key trading partners there are also significant implications for the export and ongoing market access of key commodities and processed products. The Government takes a scientific approach to its quarantine rules and regulations, and any necessary import risk analysis.
- *Creating an innovative culture* - the RDCs have a clear and strong mandate to develop the skills and abilities of the people in their industries and those of the relevant scientific community. An innovative culture is essential for those involved in our rural industries.

The Government Priorities for Rural Research have been incorporated into RIRDC Corporate Goals and hence the objectives of the Deer R&D Plan.

## **RIRDC Corporate Goals**

RIRDC's Corporate Goals, expressed through the RIRDC Corporate Plan 2003-2008 are:

- *Develop new opportunities* – to achieve a more diverse rural sector through development of new agricultural and related industries;
- *Adopt new technologies and systems for established industries* – to enhance and foster innovative rural industries through targeted investment in research and development;
- *Improve the competitiveness and sustainability of Australian agriculture* - to enhance the efficiency and sustainability of agriculture by research into trade and environmental options to improve profitability while safeguarding future agricultural production potential; and
- *Underpin innovation and change in Australian agriculture* – to build a broader comprehension of farm and regional community opportunities and human capacity for change, learning and innovation in Australian agriculture.

RIRDC's Corporate Goals are driven by the principle that it will invest in lesser developed industries that would not otherwise be covered by the larger commodity based Research and Development Corporations.

## **CSIRO and the National Research Flagships Program**

The National Research Flagships Program, a partnership of CSIRO and other research providers, addresses six national objectives:

- Strong, sustained economic growth, new industries, competitive enterprises, quality jobs;
- Healthier, more productive lives for Australians;
- Clean, cost-efficient energy;
- More productive and sustainable use of water;
- Sustainable wealth from our oceans; and

- Growth and prosperity for regional Australia.

Of most relevance to the Deer Industry R&D Plan is the Food Futures Flagship. The Food Futures Flagship will:

- Address the international competitiveness of the Australian agrifood industry;
- Apply frontier technologies to high potential industries;
- Seek outcomes that benefit all aspects of Australian life; and
- Cover the entire food-supply chain.

The combination of new Government funding, redirected CSIRO funding and external revenue will take the total investment in the Flagships Program to close to \$1.5 billion over the seven years to 2012.

## **DAFF Industry Partnerships Program (IPP)**

In the 2005 Budget, the Australian Government announced a three-year \$15 million Industry Partnerships Program (IPP) as an extension of the pilot programme it introduced in 2004-05.

The Program aims to improve industry competitiveness, sustainability and profitability by working within industries to:

- highlight the industry's successes and build on its strengths;
- improve the industry's ability to identify and respond appropriately to threats and risks;
- ensure key stakeholders throughout the supply chain and in supporting services contribute to the industry's vision and directions; and
- develop skills and structures to improve industry and organisational capacity.

With the assistance of RIRDC, the deer industry has obtained \$350,000 in IPP funding to support the establishment and growth of Market Focused Venison Supply Chain Alliances. Key parts of the R&D Program described in this Plan will be undertaken using IPP funds contributed by the DIAA. The balance of the DIAA's IPP funding will be distributed directly to the Alliances under contract for activities outside the mandate of RIRDC (under the PIERD Act) to support the R&D program described in this plan. To ensure consistency of approach and purpose, the allocation of funds to Alliances from both funding streams (i.e. the RIRDC R&D Program and the Direct IPP program) will be based on the recommendations of a single Steering Committee established for this purpose, with representation from RIRDC, the DAFF IPP and the deer industry.



## 7. Consultation Results

Consultation with the deer industry demonstrated exceptionally strong support for the proposal to use producer R&D levy funds to support the establishment of Market Focused Venison Supply Chain Alliances. There was also support for proposals to distribute a major portion of the industry's research levy derived funds to these Alliances through R&D designed to overcome the specific impediments to growth of these Alliances, as identified by the Alliance themselves in consultation with the RIRDC Deer R&D Advisory Committee. The creation of a number of private (Alliance) benefits for discrete businesses was considered by those consulted to be the best available strategy for creating the desired public benefit. At an industry level, it is well accepted that success of the industry is most likely to occur through the promotion of these Alliances.

## **8. Industry Commitment to Research**

The commercial success of the Australian deer industry is closely linked to its commitment to R&D and there continues to be support in the industry for a levy-based industry Research and Development program. In fact, the levies were originally established at the request of the industry to assist the industry's development. However, it is realised that support for the RIRDC Deer R&D Program is likely to be strengthened through a strategic change in emphasis in the new Five Year Plan objectives and strategies as recommended in the industry endorsed approaches documented by Cox, Watson and McRae (2005).

## 9. Research Directions

This R&D Plan provides strategic direction for the industry over the next five years. The Plan presents a fundamental change in the direction and delivery methodology of the deer industry's R&D program – through vertically integrated Market Focused Venison Supply Chain Alliances and, where appropriate, velvet supply chain Alliances.

Under this plan, the initial establishment of Alliances has been supported by RIRDC (Stage 1, commenced February 2006), with each established Alliance to be subjected to an intense business planning and viability evaluation against criteria approved by the R&D Advisory Committee (Stage 2). Each Alliance that is assessed as operating according to the agreed criteria under an approved business plan that includes supply chain management, production scheduling, planned marketing, market development, transparent internal communications and grievance procedures, will then be eligible for further R&D funding for Alliance-specific projects to overcome priority factors limiting future success and growth of the particular Alliance, with priorities determined by consultation between RIRDC's Deer R&D Advisory Committee and the Alliance (Stage 3). Alliance-specific projects may be contracted to the Alliance itself (like producer-initiated R&D) or externally contracted if the Alliance does not have the necessary R&D capacity. Only those Alliances operating under an approved Business Plan will be eligible for Stage 3 funding. Over the life of the Five Year Plan it is expected that the bulk of deer R&D funding will be distributed directly to these eligible Alliances or to external R&D contractors undertaking projects for Alliances.

If the Alliances are successful, it is intended that they will be need to be largely self-supporting by 2010. Thereafter it is anticipated that the RIRDC Deer R&D Program will return to a more conventional R&D program and revisit many of its former production related objectives, with greater priority than they are given in this Plan.

See Appendix 3 for protocols for management of the IPP funds in relation to the Market Focused Venison Supply Chain Alliances – Stage 2 & 3.

# 10. Implementing the deer industry R&D program through producer initiated Alliances

The industry endorsed strategic plan for development of the venison industry recommended greater commercial relevance in RIRDC R&D funding through the establishment and funding of Venison Supply Chain Alliances.

Public funding for the establishment of Market Focused Venison Supply Chain Alliances and channelling industry R&D funds through these Alliances to assist their growth and development is based on two premises - first that the future success of the deer industry in Australia is directly dependent on overcoming existing supply chain organisational problems and secondly, that the industry will obtain maximum short to medium term return from its limited R&D funds if its R&D activities support the commercial success of Supply Chain Alliances.

However, supporting Market Focused Venison Supply Chain Alliances unavoidably results in the creation of Alliance-specific benefits, benefits that might be considered “private” benefits. The creation of such private benefits by R&D activity can however be justified if appropriate public benefits are created in the process.

Research by the United State Department of Agriculture (USDA) Economic Research Service (ERS) showed that non-exclusivity of access to R&D results is a common and significant impediment to maximising the economic benefits from public R&D activities. Since the late 1980’s the USDA and other US research agencies have actively managed their technology transfer processes through exclusive or co-exclusive licensing of access to R&D results designed to create and protect the competitive advantage of its licensees on the understanding that this is necessary to maximise the national economic benefits from US Government funded research.

This principle that the economic benefits from publicly funded research can be maximised by some restriction on access to R&D information underlies the approach proposed in this plan to the creation of Alliance-specific benefits and disclosure of the results of R&D activities undertaken by Alliances. The R&D plan accepts that such benefits may be created and retained from its R&D activities so long as there is a sufficient public benefit from this activity.

Adoption of R&D results is likely to be maximised where there is a perceived commercial advantage from adoption and this perception is itself likely to be maximised if the party has involvement and a stake in the original R&D activity. Provision of R&D funding to producer-initiated supply chain Alliances is intended to achieve this effect.

Equity of access to the benefits of R&D funding is maintained by the opportunity that every producer has had to join (or establish) a Market Focused Venison Supply Chain Alliance. The majority of producers have now taken that opportunity. (It should be noted that under the usual system where R&D funds are disbursed to independent R&D contractors, the only producers who can share in benefits obtained from their R&D contributions are those that adopt successful technologies. In the case of the deer industry, the evidence for widespread adoption of past R&D is not compelling.) Allowing producer Alliances to initiate their own R&D activities is designed to improve adoption rates.

In recognising the benefits and interests of its Alliance partners in this R&D program and supervising the conduct of R&D activities by individual Alliances, the RIRDC Deer R&D Advisory Committee and its Venison Alliance Steering Committee will be required to properly balance the interests of the individual Alliance and its members against the broader interests of the deer industry as a whole and the public interest. Guidelines have been prepared to assist these Committees in achieving this balance.

# 11. The boundary between marketing R&D and marketing

The Primary Industries and Energy Research and Development Act 1989 (“The Act”) under which RIRDC operates provides no authority for RIRDC to directly undertake marketing activity on behalf of any industry. It is clear that it was the statutory intent that RIRDC would provide assistance to persons or organisations engaged in marketing primary products but without directly undertaking such marketing. RIRDC may also assist industries with marketing of their products by “facilitat[ing] the dissemination, adoption and commercialisation of the results of [research and development](#) in relation to the [primary industry](#) or class of primary industries in respect of which the Corporation was established”.

RIRDC will support projects that fall within the boundaries of this definition and which are based on systematic experimentation or analysis of data collected in the course of the project for application as new knowledge. RIRDC will not support funding of any marketing or marketing-related project that does not involve this process or projects that are directed only at promotion or marketing without more detailed analysis.

# 12. Deer R&D Program 2006-2011

## Goal

The Deer Industry's goal is to be a profitable and sustainable food industry, with efficient vertically integrated supply chains, skilled human resources and effective marketing of a range of internationally competitive products. This will be achieved through the organisation, funding and management of a research, development and extension program that is both market focussed and stakeholder driven.

## Objectives

The Deer Industry's R&D objectives for 2006 to 2011 address four key areas in which the industry has identified problems at both whole of industry and sector-specific levels:

- Efficiency, profitability and sustainability of deer farm production
- Supply chain efficiency, quality management and value adding
- Market access and marketing arrangements;
- Human capital formation, industry organisation and communications.

## Strategies

Strategies indicate specific research areas that will contribute to achieving the Deer R&D objectives. Strategies have been defined at a level that gives research providers some guidance on where RIRDC is intending to target its investments over the period 2006-2011 and are intended to contribute to the longer term planning requirements of those providers. Strategies will be complemented by more specific research priorities published annually to give further guidance about the priority project areas that RIRDC is seeking to fund in the coming year.

## Performance Indicators

Performance indicators are provided to assess whether the research strategies have contributed to the R&D objectives. Where possible, performance indicators are linked to benchmarks for industry performance.

## Budget Allocation

Indicative ("target") budget allocations have been prepared following review of the program, based on anticipated levy revenue. These are shown in Section 13 of the Plan.

# 13. The R&D Plan

## **Objective 1      Production Efficiency, Profitability and Sustainability**

- Reduce the cost of production of deer farm products (animals for slaughter and velvet antler) that meet supply chain quality standards for domestic and export markets
- Increase the proportion of deer farm products (animals for slaughter and velvet antler) that meet supply chain specifications for higher value domestic and export markets
- Protect and improve the health and welfare of farmed deer

## **Objective 2      Supply Chain Efficiency, Quality Management and Value Adding**

- Improve transparency and efficiency in venison and velvet supply chains
- Improve value signals and value rewards in venison and velvet supply chains
- Improve venison and velvet end product consistency and quality
- Identify, evaluate and develop value-adding opportunities for venison and velvet

## **Objective 3      Market Access and Marketing Arrangements**

- Develop a competitive advantage for the Australian deer industry through a better understanding within Market Focused Venison Supply Chain Alliances of existing and potential domestic and export markets for Australian venison and velvet products
- Develop and evaluate cost-effective strategies to promote consumer awareness of the attributes of Australian venison and velvet products
- Improve domestic and export marketing strategies for Australian venison and velvet

## **Objective 4      Human Capital Formation, Industry Organisation and Communications**

- Improve the commercial relevance of deer industry R&D planning
- Improve the technical and management skills of deer industry participants
- Improve the representation and communications of deer industry participants



## **Objective 1      Production Efficiency, Profitability and Industry Sustainability**

- Reduce the cost of production of deer farm products (animals for slaughter and velvet antler) that meet supply chain quality standards for domestic and export markets
- Increase the proportion of deer farm products (animals for slaughter and velvet antler) that meet supply chain specifications for higher value domestic and export markets
- Protect and improve the health and welfare of farmed deer

### **Strategies**

- Facilitate and promote the adoption by farmers of existing knowledge about optimal nutritional management of farmed deer for high quality venison and velvet production, optimal management of breeding deer for high reproductive performance and optimal velvet harvesting and handling procedures for production of high quality velvet
- Facilitate and promote farmer participation in industry quality assurance schemes
- Facilitate and promote farmer participation in the National Velvet Accreditation Scheme
- Evaluate vaccination against Johne's disease in deer and promote adoption if vaccine efficacy is demonstrated
- Support establishment of a market assurance program for Johne's disease in deer
- Develop and promote adoption of a cost-effective technology for humane harvesting of velvet antler without use of analgesic or local anaesthetic drugs

### **Performance Indicators and Related Measures**

- Rate of adoption of technologies and production systems known to reduce production costs and/or improve product quality - >60% of deer farmers adopting recommended venison and velvet production systems by 2010
- Costs of production – cost of production of deer for slaughter <\$2.00/kg HCW, cost of production of velvet <\$40/kg on >80% of commercial deer farms by 2010
- Gross margins for venison and velvet production on commercial scale deer farms – gross margins for deer farm enterprises exceed those for cattle and sheep enterprises on comparable properties by 2010
- Internal Rate of Return on deer farm investment – IRR stabilised or increasing by 2008
- Proportion of slaughter animals turned off from deer farms that meet the highest value carcass specification of processor price grids - >80% of slaughter animals (excluding caste-for-age animals) meet target specification by 2010
- Proportion of velvet sold in premium grade at annual velvet pools - >80% of velvet from mature stags sold in premium grades by 2010
- Down-grading of deer farm products due to quality defects - <15% of slaughter animals and <7.5% velvet down-graded due to quality defects by 2010
- Weaning rates (percentage of joined females weaning a live calf) – average weaning rate >80% on commercial deer farms by 2010.
- Adoption of JD vaccination (if efficacy is demonstrated) - >80% of farms that buy or sell live deer vaccinating for JD by 2010
- Establishment of a risk management or market assurance program for Johne's disease in deer - >50% of deer farmers who engage in interstate trade in live deer enrolled in MAP by 2010
- Cost-effective and practical non-chemical method available for humane harvesting of velvet antler – non-chemical velvet harvesting method in use by 2010

## **Objective 2      Supply Chain Efficiency, Quality Management and Value Adding**

- Improve transparency and efficiency in venison and velvet supply chains
- Improve value signals and value rewards in venison and velvet supply chains
- Improve venison and velvet end product consistency and quality
- Identify, evaluate and develop value-adding opportunities for venison and velvet

### **Strategies**

- Support the establishment and business planning of vertically integrated Venison and Velvet Supply Chain Alliances that adopt operational procedures and marketing strategies likely to enhance the profitability of participants (particularly deer farmers), evaluate the commercial viability and growth prospects of established Alliances to determine their eligibility for future RIRDC program funding, facilitate identification and prioritisation of growth limiting factors for each eligible Alliance and support the development and implementation of R&D projects by Alliances to overcome specific impediments to their growth
- Support improvement of the technical capacity of venison supply chain Alliances to achieve high value end market specifications for venison products from deer carcasses they process, particularly by improvements to pre-slaughter transport, handling in lairage, post-slaughter carcass management, boning, value-added processing, packaging, labelling and shelf-life of chilled or value-added products
- Develop and/or promote the adoption of technologies or practices that reduce supply chain costs (including transaction costs) for slaughter, processing and packaging of venison and handling, storage and processing of velvet
- Evaluate the practicality and regulatory feasibility of on-farm slaughter and processing of deer to produce venison for domestic consumption
- Review and improve the Ausmeat terminology for venison
- Facilitate the development and growth of horizontal Alliances between venison processors, whether or not they are within vertical supply chain Alliances, to improve returns for venison secondary cuts and trim

### **Performance Indicators and Related Measures**

- Viable Market Focused Venison Supply Chain Alliances established – >70% of venison producers and processors participating in viable venison supply chain Alliances by 2008
- Effective R&D programs established by Alliances - >80% of eligible established Alliances undertaking R&D projects to overcome impediments to growth by 2007
- Proportion of industry products consigned to higher value domestic and export markets - >60% of venison product consigned to higher value domestic food services markets or niche export markets by 2010, <40% of venison products consigned to export or domestic commodity markets
- Storage, handling and processing costs– deer slaughter and carcass processing costs reduced by 30%, storage, total Market Focused Venison Supply Chain costs reduced by 25% by 2010.
- Practicality of on-farm slaughter for domestic consumption evaluated - practicality of on-farm slaughter for domestic consumption evaluated by 2008
- Uniform basic venison language in use in domestic venison market - >80% of Market Focused Venison Supply Chain Alliances adopting uniform basic venison language by 2008

- Market return from venison secondary cuts and trim – value of venison secondary cuts and trim exceeds value of comparable beef and sheepmeat products by 2008
- Price stability for deer farm products – 50% reduction in the volatility of farmgate prices for prime slaughter stock with 25% increase in price of prime slaughter animals for the domestic market by 2010

### **Objective 3      Market Access and Marketing Arrangements**

- Develop a competitive advantage for the Australian deer industry through a better understanding within Market Focused Venison Supply Chain Alliances of existing and potential domestic and export markets for Australian venison and velvet products
- Develop and evaluate cost-effective strategies to promote consumer awareness of the attributes of Australian venison and velvet products
- Improve domestic and export marketing strategies for Australian venison and velvet

### **Strategies**

- Investigate and assess existing and potential markets for Australian venison and velvet products in collaboration with Market Focused Venison Supply Chain Alliances, to identify current and potential demand and the factors limiting market growth, reporting the results in confidence to the relevant Alliances
- In cooperation with Market Focused Venison Supply Chain Alliances, develop effective strategies to promote consumer awareness of the attributes of Australian venison as an alternative red meat and Australian velvet as a nutraceutical supplement for man and companion animals and evaluate the cost-effectiveness of these strategies in improving consumer demand for Australian venison and velvet products
- Identify, evaluate and support strategies by which benefits from investment in market development by a Market Focused Venison Supply Chain Alliance can be captured and retained by the Alliance over time, including, in appropriate cases, product branding and point-of-sale activities
- Improve industry and end market knowledge of the bioactivity of velvet antler and velvet antler products and the commercial applications of this bioactivity

### **Performance Indicators and Related Measures**

- Improved industry knowledge of venison and velvet markets – at least one target market investigation completed by each eligible Market Focused Venison Supply Chain Alliance by 2008
- Industry confidence in the cost-effectiveness of recommended strategies for improving consumer awareness of product attributes – 100% increase in the annual investment of industry participants for activities designed to increase consumer awareness of venison and velvet, by 2010
- Increased industry confidence that benefits from investment in market development involving consumer awareness using the recommended strategies are unlikely to be captured by competitors - 100% increase in annual investment by industry participants in activities designed to increase consumer awareness of Australian venison and velvet attributes, by 2010
- Market share of Alliances that invest in recommended market development strategies - >20% per annum rate of return for Market Focused Venison Supply Chain Alliance from their investments in recommended market development strategies by 2010

- Demand for Australian venison products – 100% increase in total consumption of Australian venison by 2010 with the average price of venison consigned to all domestic and export markets maintained above that of other red meat products
- Demand for Australian velvet products – 50% increase in domestic consumption of Australian velvet antler products by 2010 at prices above export parity

#### **Objective 4      Human Capital Formation, Industry Organisation and Communications**

##### **Objectives**

- Improve the commercial relevance of deer industry R&D planning
- Improve the technical and management skills of deer industry participants
- Improve the representation and communications of deer industry participants

##### **Strategies**

- Establish and support industry consultative procedures that will facilitate improvement in the commercial relevance of the deer industry’s R&D planning and the industry’s responsiveness to changing trading conditions, specifically by supporting close liaison between RIRDC and eligible Market Focused Venison Supply Chain Alliance in the planning of R&D projects initiated by Alliances according to their individual, Alliance-specific R&D priorities
- Maintain current industry consultative processes that identify and support the funding of high priority “whole-of-industry” R&D strategies, where these are supported by the majority of established Market Focused Venison Supply Chain Alliances and other industry participants
- Maintain appropriate levels of commercial confidentiality in all Market Focused Venison Supply Chain Alliance R&D planning and reporting, to allow Alliances to capture the benefits of their R&D activities *vis-a-vis* their competitors
- Undertake or support programs designed to improve the technical knowledge, practical skills or business management skills of industry participants
- Support or provide appropriate training for participants in Market Focused Venison Supply Chain Alliances that are directly involved in the management of their Alliance
- Support appropriate training for industry participants involved in the management or administration of industry representative organisations or corporate entities established by the industry for delivery of services to the industry
- Support and facilitate the internal and external communications of democratically organised deer industry representative organisations, in particular the Deer Industry Association of Australia.
- Support and facilitate consensus in industry decision making and the involvement of key industry participants in industry decision making processes

##### **Performance Indicators and Related Measures**

- Contribution by industry participants to the R&D program – >50% of R&D projects conducted in partnership with Market Focused Venison Supply Chain Alliance by 2008, >50% increase in non-levy contributions to deer R&D program by industry participant from 2008, >80% self-funding of Alliance-specific R&D by Alliances, from 2010 onwards
- Adoption or use of R&D results - >75% rate of adoption or use of R&D results by identified target group for each project, for all projects initiated after January 2007 (target group for a project may be a single Market Focused Venison Supply Chain Alliance or the “whole of industry”)

- Business and management skills of industry participants - >80% of industry participants undertake some relevant business skills training by 2010
- Management capacity of Market Focused Venison Supply Chain Alliance – relevant Alliance management training provided for at least two Alliance administrators from each eligible supply chain Alliance by 2008
- Management and administrative capacity of elected and non-elected officers in the industry representative organisations – appropriate organisational management training provided to not less than two persons nominated by the DIAA, by 2010
- Participation in major industry representative organisation - >80% of industry players participating in industry decision making through a single industry representative organisation by 2010

# 14. Deer R&D Budget 2006-2011

An indicative Five-Year R&D Plan budget has been prepared using a forecast levy income and current reserves. The budget is based on the current levy rates and production levels providing an estimated program income of \$170,000-200,000 per annum which includes \$52,000 per annum from RIRDC core funds. It is envisaged that financial reserves will significantly fund the plan. Further, it should be noted that DAFF levy collection costs are \$15,000-20,000 per annum.

## Proposed Deer R&D Budget 2006-2011

	% of 5 Year Budget	2006/2007	2007/2008	2008/2009	2009/2010	2010/2011
OPENING BALANCE		458,928	320,228	133,728	67,728	72,728
<b>REVENUES</b>						
Industry Levies		80,000	100,000	120,000	140,000	160,000
Commonwealth Contributions		25,000	22,500	25,000	30,000	35,000
IPP Funding		250,000 <sup>1</sup>				
RIRDC Core Contribution <sup>1</sup>		52,000	52,000	52,000	52,000	52,000
Interest		20,000	5,000	1,000	1,000	1,000
<b>TOTAL REVENUE</b>		<b>885,928</b>	<b>499,728</b>	<b>331,728</b>	<b>290,728</b>	<b>320,728</b>
<b>EXPENDITURE</b>						
<b>Objective 1</b> Production Efficiency, Profitability and Industry Sustainability	15%	40,000	30,000	40,000	30,000	60,000
<b>Objective 2</b> Supply Chain Efficiency, Quality Management and Value Adding	59%	310,000	180,000	120,000	90,000	100,000
<b>Objective 3</b> Market Access and Marketing Arrangements	22%	130,000	80,000	30,000	20,000	30,000
<b>Objective 4</b> Human Capital Formation, Industry Organisation and Communications	4%	20,000	10,000	10,000	10,000	10,000
R&D Program Total	100%	500,000	300,000	200,000	150,000	200,000
Collect and Admin Costs (% of R&D Program Total)	24%	65,700	66,000	64,000	68,000	60,000
<b>TOTAL EXPENDITURE</b>		<b>565,700</b>	<b>366,000</b>	<b>314,000</b>	<b>268,000</b>	<b>260,000</b>
CLOSING BALANCE		320,228	133,728	67,728	72,728	60,728

### Budget Notes:

The budget includes a revenue estimate of \$250,000 contribution from the DIAA from the total IPP allocation of \$350,000. The balance of \$100,000 will be allocated to activities that are outside the direct mandate of RIRDC under the *Primary Industries and Energy Research and Development Act* but which are nonetheless integral to the Deer Industries Development Plan.

# 15. References

Cox RJ, GK Watson and TB McRae (2005), “Industry Endorsed Strategic Plan for the Australian Venison Industry,” Report of RIRDC Project US-130A

Heisey PW, JL King, KD Rubenstein, and R Shoemaker (2006), “Government Patenting and Technology Transfer,” USDA Economic Research Report No. 15.

Moffat DA (2005), “A Domestic Marketing Positioning Strategy for Australian Venison’ – Report of RIRDC Project US-130A.

# Appendices

## Appendix 1: Alignment of Plan Objectives with RIRDC'S Corporate Goals/Strategies

RIRDC Goal	Specific RIRDC Strategy	Deer R&D Plan Objective
<b>Goal 1</b> Develop new opportunities.	Utilise advances in science such as biotechnology, genomics, communications and information technology to develop and commercialise new industries and new products.	2
<b>Goal 2</b> Adopt new technologies and systems for established industries.	Foster 'frontier technology' R&D packages as the driver of competitive advantage in established industries.	
	Deliver R&D packages that are amenable for adoption by industry and key stakeholders.	1,2,3,4
	Disseminate R&D results through effective demonstration and communication systems and channels.	1,4
<b>Goal 3</b> Improve the competitiveness and sustainability of Australian agriculture.	Undertake research that addresses trade impediments and options to respond to current distortions in world trading conditions.	3
	Provide analyses to contribute to future market access negotiations.	3
	Develop and promote alternative cropping and animal husbandry systems which avoid or reduce negative environmental impacts in the rural sector.	
<b>Goal 4</b> Improve the competitiveness and sustainability of Australian agriculture.	Augment market access systems through measures to improve scientific analysis and controls over invasive pests and diseases.	1
<b>Goal 5</b> Underpin innovation and change in Australian agriculture.	Ensure wide recognition of the importance of human capacity building in delivering positive changes for rural and regional Australia.	4
	Improve the business and financial risk management skills of Australian producers.	4



	Facilitate wider availability of information technology in rural Australia to secure and utilise timely data and information for business improvement.	
	Examine and design processes to enhance rural learning and practice, including rural extension and education.	1,4
	Contribute to the development of the next generation of rural industry leaders.	4
	Investigate processes of social change in rural Australia and options to improve outcomes from industry restructure.	

## Appendix 2: Contacts for R&D Program

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## **Appendix 3: Market Focused Venison Supply Chain Alliances Guidelines for alliance project consideration – Stages 2 & 3**

### **How will Stages 2 and 3 work?**

Market Focused Venison Supply Chain Alliances established in Stage 1 will be eligible to receive funding for specific R&D projects under Stage 3 of the Alliances project subject to their agreement to operate under a Business Plan developed in Stage 2 and approved by the Steering Committee.

A key element of Stage 2 for each Alliance is the identification of those factors limiting the growth and/or efficiency of the Alliance that can be addressed by R&D projects under Stage 3 of the Alliances project. Stage 3 projects include both “development” projects directed at establishing processes within Alliances as well as projects directed at acquiring new knowledge using traditional research protocols.

Stage 3 R&D priorities will be identified by the Alliances themselves in their applications for funding and their Business Plans. The Steering Committee will also be looking for applications with common objectives where there may be opportunities for co-operation between Alliances.

It is anticipated that the objectives of most projects will be specific to a particular Alliance. This Alliance-specific approach follows the recognition that restricting R&D activity to projects with an identifiable whole-of-industry benefit has resulted in a lot of R&D activity being directed at work which the majority of industry participants regard as low priority and with limited prospects for short-term adoption. The objective of the Alliances project is to direct industry funding into R&D activities that are likely to be adopted by a sector of the industry at least, given commitment to the R&D by that sector of the industry

### **Who will assess the projects?**

To avoid the conflicts of interest that would arise as a consequence of industry members of the RIRDC Deer R&D Advisory Committee being members of particular Venison Alliances that will receive funding under the R&D program, an independent “Venison Supply Chain Alliances Project Steering Committee” has been established to review applications from Alliances for funding under Stages 2 and 3 of the project.

The Steering Committee includes members with experience in Supply Chain Alliance management in other meat industries. The Committee will report directly to the Advisory Committee on the Alliance project progress but will maintain the confidentiality of commercially sensitive information in Alliance applications and progress reports.

### **How will Industry Partnership Program funds be administered?**

It is anticipated that RIRDC, the Department of Agriculture, Fisheries and Forestry (DAFF) and the Deer Industry Association of Australia (DIAA) will set out the basis for RIRDC use of the IPP funds allocated by DAFF to the DIAA in a Memorandum of Understanding.

This joint funding arrangement will be established by RIRDC by authority of s.14 of the PIERD Act.

Of the total of \$350,000 available through the Industry Partnerships Program (IPP) it is anticipated that \$250,000 will be paid directly to RIRDC (as project manager) by DAFF for use in the Market Focused Venison Alliances project. Of this \$250,000, up to \$150,000 will be used to fund the development of Alliance Business Plans in Stage 2 of the project, with the balance available for Stage 3 projects. RIRDC will administer these IPP funds on behalf of the deer industry on the basis that funds administered by RIRDC can only be applied for activities that are allowable under the PIERD Act.

The ‘remaining’ \$100,000 of DIAA IPP funds will be transferred by DAFF directly under contract to Venison Alliances to be used for purposes that are outside the RIRDC mandate from the PIERD Act, in particular for promotion of marketing activities undertaken by the Alliances outside the usual R&D context.

All funds administered by RIRDC will be managed in accordance with the usual principles and procedures for RIRDC grant management.

Allocation of funds by RIRDC will be based on recommendations from the Venison Supply Chain Alliances Project Steering Committee to the R&D Advisory Committee.

### **How does the PIERD Act define the boundaries for activities that might be approved for Market Focused Venison Supply Chain Alliances?**

The first objective of the *Primary Industries and Energy Research and Development Act 1989* (“the Act”) is “increasing the economic, environmental and social benefits to [members](#) of primary industries and to the community in general by improving the production, processing, storage, transport or *marketing* of the products of primary industries”.

The Act confers statutory responsibility upon RIRDC for the coordination and funding of industry “R&D activities” consistent with the 5 Year R&D Plan and Annual Operational Plan. Specifically, s.13 of the Act authorises the Corporation to “enter into an agreement with a person for the carrying out of *R&D activities* by the person”.

“R&D activity”, in relation to a [primary industry](#) or class of primary industries, includes:

- (a) an R&D project in respect of that industry or class; or
- (b) the training of persons to carry out [research and development](#) in respect of that industry or class; or
- (c) the dissemination of information, or the provision of advice or assistance, to persons or organisations engaged in any aspect of:
  - (i) that industry or class; or
  - (ii) the production, processing, storage, transport or marketing of goods that are the produce, or that are derived from the produce, of that industry or class;

for the purpose of encouraging those persons or organisations to adopt technical developments designed or adapted to improve that aspect of the industry or class, or that production, processing, storage, transport or marketing; or

- (d) the publication of reports, periodicals, books or papers containing information that is related to [research and development](#) in respect of that industry or class; or
- (e) an activity incidental to an activity referred to in paragraph (a), (b), (c) or (d).

"Research and development", in relation to a [primary industry](#) or class of primary industries, means:

systematic experimentation and analysis in any field of science, technology or economics (including the study of the social or environmental consequences of the adoption of new technology) carried out with the object of:

- (a) acquiring knowledge that may be of use in obtaining or furthering an objective of that [primary industry](#) or class, including knowledge that may be of use for the purpose of improving any aspect of the production, processing, storage, transport or marketing of goods that are the produce, or that are derived from the produce, of that [primary industry](#) or class; or
- (b) applying such knowledge for the purpose of attaining or furthering such an objective

By s.11(e) of the Act, RIRDC is also authorised "to facilitate the dissemination, adoption and commercialisation of the results of [research and development](#) in relation to the [primary industry](#) or class of primary industries in respect of which the Corporation was established".

Whilst the Act provides no authority for RIRDC to directly undertake marketing activity on behalf of any industry, given the declared statutory objective to improve "marketing of the products of primary industries" and the inclusion within the definition of the "R&D activity" of primary industries for which RIRDC is responsible of "provision of advice or assistance, to persons or organisations engaged in any aspect of ..... (ii) the .... marketing of goods that are the produce, or that are derived from the produce, of that industry or class", it is clear that it was the statutory intent that RIRDC would provide assistance to persons or organisations engaged in marketing primary products but without directly undertaking such marketing. RIRDC may also assist industries with marketing of their products by "facilitat[ing] the dissemination, adoption and commercialisation of the results of [research and development](#) in relation to the [primary industry](#) or class of primary industries in respect of which the Corporation was established".

Whilst the definition of "R&D activity" provides limited bounds to the circumstances in which assistance may be provided for "marketing of goods that are the produce of that industry", application of the definition of "research and development" in this context would significantly narrow these circumstances. On this interpretation, assistance could only be provided where the R&D activity involved "systematic experimentation and analysis in any field of science, technology or economics ....carried out with the object of (a) acquiring knowledge that may be

of use in obtaining or furthering an objective of that primary industry or class, including knowledge that may be of use for the purpose of improving any aspect of the .... marketing of goods that are the produce, or that are derived from the produce, of that primary industry or class; or (b) applying such knowledge for the purpose of attaining or furthering such an objective.”

For the purposes of the R&D Plan, the narrower interpretation is adopted. The R&D Plan does not propose funding by RIRDC of any marketing or marketing-related project that does not involve systematic experimentation or analysis of data collected in the course of the project for application in another time or place – in other words, the development of new knowledge. Application for funding of projects that are directed only at promotion or marketing without more will not be funded.

## **What principles will be followed in implementation of the R&D with respect to the Market Focused Venison Supply Chain Alliances project?**

The following principles will be adopted in the implementation of the R&D Plan with respect to the Venison Alliances project. These principles are intended to allow the Committee to carefully balance the shorter and longer term interests of the Alliances, the industry as a whole, and the general public in management of the project.

### 1. Public benefit

Before recommending the funding of any project application from an Alliance, the Steering Committee will consider whether the project, if successful, will create sufficient public benefit to justify the proposed investment of industry and public funds. To the extent that it is accepted that the establishment and growth of Alliances which operate in a manner calculated to improve the profitability and sustainability of producer members is consistent with the objects of the *Primary Industries and Energy Research and Development Act 1989* and therefore in the public interest, the Steering Committee will assess the probability that each proposed project will contribute to the success and growth of the applicant Alliance. If the Steering Committee is not satisfied the proposed project will, in the opinion of the Steering Committee, contribute to success and growth of the Alliance and the profitability and sustainability of producers, the project will not be funded.

### 2. Alliance-specific R&D benefits

The default position to be adopted in managing the Alliances project is that any benefit obtained from R&D undertaken with the use of public funds should be disseminated widely unless this would not be in the public interest. In particular, the Steering Committee will seek out opportunities for cooperation between Alliances in the identification and development of mutual benefits.

In considering each application for funding by an Alliance, the Steering Committee will consider whether the project, if funded and successful, will create an ongoing Alliance specific benefit. If this is the case, the Steering Committee will then consider whether it is in the public interest to create this ongoing Alliance-specific benefit and for how long the Alliance should have exclusive access to the benefit.

Factors to be taken into consideration in determining the duration of exclusive access to the benefit will include (1) the contribution of the Alliance in cash or in kind towards the project that resulted in the benefit, (2) the extent to which the Alliance would be harmed by loss of its exclusive access to the benefit, (3) the degree of non-exclusivity of access that will maximise the benefit for the Australian deer industry as a whole (for example, co-exclusive access may be preferable to non-exclusive access) and (4) the anticipated impact of the proposed degree of exclusivity on the operation of relevant markets.

### 3. Disclosure of R&D Results

The default position is that disclosure of R&D results should be undertaken to the extent and by methods and at a time when the benefits of such disclosure for the Australian deer industry as a whole are maximised.

Prior to the approval of funding, the Steering Committee will reach agreement with the applicant Alliance on the methods, extent and timing of disclosure of the results of the R&D activity. Full public disclosure is to be the default position unless otherwise agreed as a term of the funding contract. Agreements on disclosure will not affect the usual contractual obligation to report R&D results. In the event an Alliance ceases to operate, individual members of the Alliance will have no proprietary right in the results of R&D activities previously completed by the Alliance and RIRDC will determine the method, extent and timing of disclosure of any results not previously publicly disclosed to maximise the benefit of disclosure for the industry as a whole.

Factors to be taken into consideration in determining the extent and timing of disclosure will include (1) the contribution of the Alliance in cash or in kind towards the project that resulted in the benefit, (2) the extent to which the Alliance would be harmed by the disclosure, (3) the extent to which the Australian deer industry as a whole would benefit from disclosure and (4) the anticipated impact of the proposed disclosure on the operation of relevant markets.

### 4. Confidentiality procedures

The Steering Committee will handle all commercially sensitive information received from Alliances in the course of its R&D approval and monitoring activities in confidence. The Steering Committee will respond to inquiries from the R&D Advisory Committee for information about the Alliances project in a way that does not compromise the commercial confidentiality of information it has obtained to facilitate effective supervision of Alliance projects.

### 5. Allowable R&D Activities

The Steering Committee will not recommend the funding of projects that include activities that are not R&D activities under the PIERD Act. In determining what is an “allowable” activity, the Steering Committee will apply the narrow interpretation of “R&D activity” referred to above in section 11 of the R&D Plan. Specifically, the Steering Committee will only support the marketing activities of Alliances that involve systematic experimentation, performance monitoring and analysis for the purpose of obtaining information to be applied to improve the performance of the Alliance or wider industry in the future. Funding of marketing activities that are not part of an allowable R&D activity as defined in section 11 of the R&D Plan will not be approved.



6. Maintaining and reporting compliance with these guidelines

The Steering Committee will report not less than once each year to the Deer R&D Advisory Committee concerning its decision-making procedures and its decisions with regard to the assessment of public benefit, Alliance-specific benefits, disclosure of results, confidentiality procedures, the types of R&D activities undertaken by Alliances in funded projects and its compliance with these guidelines to allow the Deer R&D Advisory Committee to confirm to RIRDC that its Steering Committee is evaluating funding applications, monitoring the use of funding and the reporting of results by Alliances in accordance with these guidelines.

When appropriate, compliance with those terms of a funding agreement made in consideration of these guidelines is to be a condition of funding.

In the event that the Steering Committee becomes aware of any breach of these guidelines by a funded Alliance, the Steering Committee will advise the Chairperson of the R&D Advisory Committee immediately. In the event that the Advisory Committee becomes aware of any breach of these guidelines, the Advisory Committee will advise the relevant RIRDC General Manager immediately.