AgriFutures Kangaroo Program Strategic RD&E Plan (2021-2026)

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AgriFutures Kangaroo Program Strategic RD&E Plan 2021-2026

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In submitting this report, the researcher has agreed to AgriFutures Australia publishing this material in its edited form.

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This Strategic RD&E Plan 2021-2026 builds on initial work completed in 2016 by Miracle Dog Pty Ltd on a Strategic RD&E Plan specifically for the Australian kangaroo industry.

Electronically published by AgriFutures Australia in September 2021.

AgriFutures Australia is the new trading name for Rural Industries Research & Development Corporation (RIRDC), a statutory authority of the Federal Government established by the Primary Industries Research and Development Act 1989.
The AgriFutures Kangaroo Program invests in research, development
and extension (RD&E) to foster a sustainable and more profitable
Australian kangaroo industry.

The commercial harvest of kangaroos in Australia has
been described as “one of the world’s best wild-harvest
operations” with management goals based firmly on
principles of enhancing animal welfare. Kangaroos are
harvested in line with the National Code of Practice for
the Humane Shooting of Kangaroos and Wallabies for
Commercial Purposes, released in 2020, which sets
an achievable standard of humane conduct and is the
minimum required of persons shooting kangaroos and
wallabies for commercial purposes.

The industry is highly regulated and operates under
a quota system administered by state and federal
governments. The scientific community and state
wildlife management agencies consider that annual
harvest levels in the order of 15% of the populations for
eastern and western grey kangaroos and wallaroos, and
20% for red kangaroos, are sustainable. However, since
2014, the number of kangaroos harvested has been well
below the permitted quota. This suggests that there is
a sustainable resource available should demand for
kangaroo products, namely meat and leather, increase.

It’s within this context that the AgriFutures Kangaroo
Program Strategic RD&E Plan has been developed.
Strategic RD&E Plans are a key part of implementing
AgriFutures Australia’s RD&E strategies, and are the
base on which investments are made on behalf of our
levied industries. These Plans identify productivity and
sustainability RD&E priorities and the planned outcomes
for each industry. Each has an appropriate balance of
productivity and sustainability RD&E priorities.

AgriFutures Australia’s vision is to grow the long-term
prosperity of Australian rural industries. We have three
strategies to grow profitability and sustainability in our
levied industries:

• Engaging industry participants in determining
  RD&E priorities.
• Investment in innovation that assists levied
  industries to be more profitable.
• Delivering outcomes to maximise industry
  uptake and adoption.

The profitability, productivity and sustainability of rural
industries is AgriFutures Australia’s core business, and
the organisation works with its portfolio industries to
invest in their priority RD&E needs. AgriFutures Australia
fosters strong relationships with industry partners,
including the kangaroo industry, to ensure RD&E
investment leads to practical knowledge and innovation
that can be adopted by industry members.

AgriFutures Australia will continue to work with the
kangaroo industry to ensure the five-year research
priorities meet industry needs and are informed by Government priorities.

“AgriFutures Australia will continue to work with the kangaroo industry
to ensure the five-year research priorities meet industry needs and are informed by Government priorities.”

John Smith
General Manager, Research
AgriFutures Australia
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Our vision
To grow the long-term prosperity of Australian rural industries

Executive summary

The AgriFutures Kangaroo Program Strategic RD&E Plan 2021-2026 outlines the key development priorities of the Australian kangaroo industry, and guides research, development and extension investments linked to those priorities.

The kangaroo industry’s priorities for 2021-2026 are:

Priority 1 The kangaroo industry’s licence to operate is enhanced.
Priority 2 The consumer appeal of kangaroo products is enhanced.

These priorities are each underpinned by three strategies that will influence RD&E investment decisions made by the AgriFutures Kangaroo Program. Details of activities to implement the priorities, and key performance indicators to measure success, are provided within the body of the Plan.
Table 1: The Kangaroo Program Strategic RD&E Plan 2021-2026 is presented as a ‘Plan on a page’ below. All key performance indicators (KPIs) are to be achieved by the end of the Plan in 2026.

<table>
<thead>
<tr>
<th>Priorities</th>
<th>Strategies</th>
<th>Activities</th>
<th>KPIs</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1</td>
<td>Continuous focus on enhancing animal welfare outcomes</td>
<td>1.1.1 Compile the scientific information available on the industry’s animal welfare practices (desktop exercise).</td>
<td>Scientific evidence is compiled and is a standard sufficient to gain third-party endorsement of the industry’s animal welfare practices.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1.1.2 Compare the animal welfare credentials of the kangaroo industry with other animal-based proteins.</td>
<td></td>
</tr>
<tr>
<td>1.2</td>
<td>Demonstrate the sustainability credentials of the industry</td>
<td>1.2.1 Compile the scientific information available on the sustainability of the industry (desktop exercise) and develop a counterfactual piece of research – ‘What would be the environmental and biodiversity impacts if kangaroos were not humanely harvested?’</td>
<td>Scientific evidence on industry sustainability is compiled.</td>
</tr>
<tr>
<td>1.3</td>
<td>Undertake effective communications and extension</td>
<td>1.3.1 Distribute final reports and easily digestible summary information about activities undertaken.</td>
<td></td>
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<td></td>
<td></td>
<td>1.3.3 Undertake targeted market research to assess impacts on industry and product perceptions.</td>
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</tbody>
</table>

1. The kangaroo industry’s licence to operate is enhanced

2. The consumer appeal of kangaroo products is enhanced

<table>
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<th>Strategies</th>
<th>Activities</th>
<th>KPIs</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.1</td>
<td>Identify the nutritional value of kangaroo meat</td>
<td>2.1.1 Undertake nutritional studies on kangaroo meat.</td>
<td>Nutritional benefits of kangaroo meat have been identified for promotion by industry players.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2.1.2 Compile scientific information on the nutritional benefits of kangaroo meat to support marketing activities.</td>
<td></td>
</tr>
<tr>
<td>2.2</td>
<td>Demonstrate the food safety credentials of the industry</td>
<td>2.2.1 Research the effects of gamma irradiation on kangaroo meat and other interventions as required for market access.</td>
<td>Scientific data is generated to satisfy regulators that gamma irradiation is a safe treatment for kangaroo meat.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2.2.2 Promote the hygiene practices and food safety credentials of the kangaroo meat chain.</td>
<td>Marketing activities demonstrate the whole-of-chain safety of kangaroo meat.</td>
</tr>
<tr>
<td>2.3</td>
<td>Enhance value through improved product specifications</td>
<td>2.3.1 Research the factors (cut, type of animal, area of origin) that affect the eating quality of kangaroo meat.</td>
<td>Product specifications are determined that support eating quality assurance claims.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2.3.2 Review the approaches taken in other wild-kill industries to determine product specification and differentiation</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>2.3.3 Develop a product specification and grading framework suitable for the industry.</td>
<td></td>
</tr>
</tbody>
</table>

Targeted market research shows an improved consumer perception of the industry and kangaroo products. 80% of stakeholders in the kangaroo industry are well-informed of the activities and outcomes of this Plan.
Australia’s commercial kangaroo harvest industry has been described as “one of the world’s best wild-harvest operations” with management goals based firmly on principles of enhancing animal welfare.1 The kangaroo industry is highly regulated and operates under a quota system administered by state and federal governments. Only four species of kangaroo are approved for commercial harvest and export – the red, eastern grey and western grey kangaroos, and the common wallaroo or euro. None are listed as a threatened species under national environment law, or under state or territory legislation.

Kangaroo numbers, quota and harvest

The scientific community and state wildlife management agencies consider that annual harvest levels in the order of 15% of the populations for grey kangaroos and wallaroos, and 20% for red kangaroos, are sustainable. The sustainable harvest quotas are set at or below these rates and represent an upper harvest limit independent of industry demand. To ensure there is no detriment to any species in any region, each state is divided into zones for monitoring and quota-setting. Queensland, NSW, South Australia and Western Australia have management plans for the commercial harvest of kangaroos for export. Smaller-scale commercial harvest also occurs in Victoria. Two species of wallaby are commercially harvested in Tasmania.2


Figure 1 provides a summary of the main statistics in relation to wild harvest of kangaroos in Queensland, NSW, South Australia and Western Australia.

Key points from the data include:

- The kangaroo population can vary significantly, depending on season. Over the four years from 2011 to 2014, the population more than doubled.
- The sustainable quota as a percentage of the kangaroo population is very close to 15% each year.
- Actual commercial harvest is generally significantly less than the approved quota. The annual number of kangaroos harvested from 2014-18 was about 20% of the quota. In 2019, the number harvested was 25% of the quota. In the 2000s, harvest percentage was considerably higher, due largely to lower quota numbers. The highest use of quota was at 86% in 2006, with a strong Russian trade.3
- The kangaroo population is highest in Queensland, followed by NSW, South Australia and Western Australia.

Kangaroo products and value

There are three products from wild harvest of kangaroos:

- Meat for human consumption
- Meat for use in pet food
- Kangaroo skins and leather

Precise figures on the ratio of human consumption to pet food use is not readily available, but it has been estimated at about 50:50 by weight and 70:30 by value.4

Of meat sold for human consumption, 10-15% of kangaroo is sold as primal cuts, achieving the highest unit price on the carcass. The balance is sold for processing/manufacturing. Value-adding in the domestic market through products such as marinated cuts, rissoles and sausages increases the value of non-primal cuts. The average weight of a kangaroo carcass is about 25 kilograms and fetches an average price of about $1/kg.

The most recent statistics available indicated that the gross value of production for the Australian macropod industry (of which kangaroos and wallabies are two) for 2019-20 was $30.8 million.5

From an export perspective, some data is available from ABS reports. From 2011-12 onwards, many categories that were specific to ‘kangaroo’ products were merged with other similar products, thus making data difficult to identify. The following has been customised from ABS data.6

2http://www.environment.gov.au/biodiversity/wildlife-trade/natives#a3
4Oliver & Doan (2013), Kangaroo Meat Export Market Access Analysis
5Jobson, D. (2019), personal communication
6Department of Agriculture, Water and the Environment (2020), organisational communication
7Curtis, K. (2018), personal communication
### Table 1: Value (AUD million, nominal) of Australian exports of fresh, processed or other (not elsewhere specified) kangaroo meat

<table>
<thead>
<tr>
<th>Year</th>
<th>Fresh</th>
<th>Processed*</th>
<th>Other*</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013-14</td>
<td>21.55</td>
<td>0.11</td>
<td>0.88</td>
</tr>
<tr>
<td>2014-15</td>
<td>18.84</td>
<td>0.07</td>
<td>1.02</td>
</tr>
<tr>
<td>2015-16</td>
<td>18.65</td>
<td>0.09</td>
<td>1.59</td>
</tr>
<tr>
<td>2016-17</td>
<td>14.49</td>
<td>0.09</td>
<td>3.10</td>
</tr>
<tr>
<td>2017-18</td>
<td>16.07</td>
<td>0.35</td>
<td>3.39</td>
</tr>
</tbody>
</table>

* Estimated using the ratio of (kangaroo) to (kangaroo + other) in the five years 2006-07 to 2010-11 when ‘kangaroo’ was reported separately.

### Table 2: Volume (tonnes) of Australian exports of fresh and processed kangaroo meat

<table>
<thead>
<tr>
<th>Year</th>
<th>Fresh</th>
<th>Processed*</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013-14</td>
<td>4,619</td>
<td>28.5</td>
</tr>
<tr>
<td>2014-15</td>
<td>3,860</td>
<td>59.0</td>
</tr>
<tr>
<td>2015-16</td>
<td>3,406</td>
<td>13.7</td>
</tr>
<tr>
<td>2016-17</td>
<td>2,986</td>
<td>15.2</td>
</tr>
<tr>
<td>2017-18</td>
<td>3,031</td>
<td>67.8</td>
</tr>
</tbody>
</table>

* Estimated using the ratio of (kangaroo) to (kangaroo + other) in the five years 2006-07 to 2010-11 when ‘kangaroo’ was reported separately.

In recent years, the main export markets for fresh kangaroo meat have been Belgium, Germany, the Netherlands, Papua New Guinea and France.

### Previous plans, reviews and priorities

Williams and Pattinson\(^8\) developed a revised New & Developing Animal Industries Five Year RD&E Plan in 2013 covering the period until 2018. The Plan incorporated an appendix for each levy-paying industry, including kangaroos.

The foci of attention in that plan were:
- Marketing and market development
- Export market access
- Further development of the skin market
- Quality control
- Social licence to operate
- Increasing costs on all fronts

In 2015, the kangaroo industry commissioned an analysis to identify opportunities to develop the kangaroo meat trade in volume and value. The report identified primary markets (EU, US, Japan but pet food only), secondary markets (Japan, South Korea) and markets into which there is currently no access (China, Russia) for meat for human consumption and pet food.

The report also made 22 recommendations for export market development. These included: Invest in an export market development program on meat for human consumption; Improve market and industry intelligence and insight; Acquire improved access into current markets and new access into alternative reliable markets; Invest in product development to effectively use the whole carcase at a more premium level; Develop the pet food sector for kangaroo meat; Expand industry capacity; Conduct an in-depth study on halal processing requirements and accreditation; Conduct a feasibility study on establishing a standard meat grading system.

In 2016, Williams and Pattinson undertook initial work on an RD&E Plan specifically for the Australian kangaroo industry, which included a SWOT analysis (covering human consumption, pet food and skins). That SWOT analysis has been updated for inclusion in this Strategic RD&E Plan 2021-2026, and is presented on the next page.


\(^9\)Oliver and Doan (2015). Kangaroo Meat Export Market Access Analysis
SWOT analysis

Figure 2: SWOT analysis of the Australian kangaroo industry

Strengths
Industry as a whole
• The industry has a positive story to tell – it delivers positive environmental benefits for the kangaroo population and rangelands.
• Kangaroo is a unique product.
• Industry is well-regulated.
• Industry levy means there is a funding pool for RD&E projects.

Human consumption sector
• Health benefits in kangaroo meat have been identified by medical fraternity.
• Australian consumers are increasingly prepared to try new foods.

Pet meat sector
• Fresh kangaroo meat is a great pet food product.
• Industry delivers a wholesome product.

Skin sector
• Kangaroo leather is recognised as being unique.
• It is the strongest light-weight leather in the world.

Weaknesses
Industry as a whole
• Mixed messages – is this a product for human consumption or pet food?
• Supply can fluctuate (e.g. quota changes due to seasonal conditions), limiting responsiveness to increased demand.
• Low new harvester recruitment rate.
• Many small processing plants have varying standards.
• Complex and variable regulatory environment.

Human consumption sector
• Still some problems with consumer perceptions of kangaroo (especially after consumer influencers such as "Kangaroo, The Movie").
• Low domestic restaurant trade uptake.
• Limited technical information sharing between processors, e.g. no benchmarking study.
• Product quality can be variable.
• No generic product marketing.
• The bulk of export production is sold to the consumer as ‘meat’ not ‘kangaroo’.

Pet meat sector
• Competing against human consumption prices for supply.
• Low use by major manufacturers.

Skin sector
• Low skin prices.
• Product variability.
• Cost of tag removal and disposal.
• Most end products are sold to the consumer as ‘leather’, not ‘kangaroo leather’.

Opportunities
Industry as a whole
• Strong goodwill in government and public for wildlife use and improvements in rangeland sustainability.
• Some resource in VIC, SA, NT and NSW not under current commercial use management plans.
• Lower methane production than beef or lamb.

Human consumption sector
• Increasing domestic acceptance of game/indigenous meats, especially at retail level.
• Improved exposure to kangaroo for trainee chefs.
• Strong domestic market growth potential (including smallgoods).
• Higher prices for red meats generally domestically.
• Export demand for manufacturing meat.
• Room for new product development, e.g. ready-to-heat meals.

Pet meat sector
• Pet owners increasingly willing to pay for premium packaging/image.

Skin sector
• Increased value-adding prior to export.

Threats
Industry as a whole
• Staff shortages for harvest and processing.
• Freight a relatively high component of product cost.
• Australian society is increasingly emphasising environmental and animal welfare issues – without a good understanding, the industry can be portrayed as having negative environmental or animal welfare consequences.
• Expensive public liability insurance for harvesters.

Human consumption sector
• Access to some markets.
• High reliance on a few key markets, especially for manufacturing meat.
• No significant domestic meat manufacturing market.
• Lack of confidence among consumers about how to use kangaroo meat.

Pet meat sector
• Demand for kangaroo as a pet food product is currently high, so this text can be deleted.
• Low current supply may mean that many consumers will turn to alternative products.

Skin sector
• Ongoing challenges from animal liberationists, e.g. targeting the skin sector internationally.
• Improvements in the pricing and technology of ‘synthetic leather’ options.
• Substitution with cheaper but slightly inferior options such as goat or calf keeps a cap on prices.
Research

Macropod levy
The macropod levy comprises National Residue Survey (NRS) testing and research and development (R&D), as shown in the table below.  

Table 4: Breakdown of the Australian macropod levy

<table>
<thead>
<tr>
<th>Macropod</th>
<th>NRS</th>
<th>R&amp;D</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kangaroos – for human consumption</td>
<td>$0.03/carcase</td>
<td>$0.04/carcase</td>
<td>$0.07/carcase</td>
</tr>
<tr>
<td>Other macropods – for human consumption</td>
<td>$0.00</td>
<td>$0.04/carcase</td>
<td>$0.04/carcase</td>
</tr>
<tr>
<td>All macropods – for animal consumption</td>
<td>$0.00</td>
<td>$0.03/carcase</td>
<td>$0.03/carcase</td>
</tr>
</tbody>
</table>

AgriFutures Australia receives the R&D levy allocation to invest in line with the objectives of the Program’s Strategic RD&E Plan. AgriFutures Australia also receives matching funding* from the Australian Government, which is allocated to the Program at 50c per dollar of eligible expenditure.

The R&D levy allocation totals about $60,000 per annum. When combined with Australian Government matching funding, the Kangaroo Program has about $80,000-$90,000 per annum to invest.

Industry consultation

The following review and consultation were undertaken to determine the kangaroo industry’s priorities and strategies for this 2021-2026 Strategic RD&E Plan:

- Review of initial work completed in 2016 on a Strategic RD&E Plan specifically for the Australian kangaroo industry; Industry objectives proposed at the time were ‘By 2021, the kangaroo industry will be consistently and profitably using the full sustainably available kangaroo resource’; and ‘By 2021, the kangaroo industry will be broadly recognised by the Australian public as delivering an essential and valuable environmental management service’.

- Contact with the industry peak body and members of the executive to advise that a 2021-2026 Strategic RD&E Plan was being developed, and to obtain relevant information.

- Drafting of the Plan.

- Targeted circulation of the draft Plan to obtain feedback from industry participants (both written and verbal).

- Preparation of the final Plan.

AgriFutures Australia is committed to achieving significant benefits to industry with available resources through the implementation of targeted and high-impact RD&E projects. The consultation process highlighted several issues that the kangaroo industry considers roadblocks to growth and development. Of these impediments, those that can be addressed with targeted RD&E have shaped AgriFutures Australia’s investment priorities for the next five years.

*AgriFutures Australia receives matching funding from the Australian Government, calculated under the Primary Industries Research and Development (PIRD) Act. Subject to some limitations, this Commonwealth matching funding is capped at the lesser of 50% of eligible expenditure or 0.5% of industry gross value of production (GVP). Industry GVP is calculated on the aggregate of all AgriFutures Australia levied industries.
AgriFutures Kangaroo Program Strategic RD&E Plan 2021-2026

Program goal

The goal of the AgriFutures Kangaroo Program is to invest in research, development and extension projects that help ensure the industry achieves the priorities set out in this Strategic RD&E Plan.

Priorities of the Strategic RD&E Plan 2021-2026

For this 2021-2026 Plan, the key priorities are:

**Priority 1**: The kangaroo industry’s licence to operate is enhanced.

**Priority 2**: The consumer appeal of kangaroo products is enhanced.

These priorities are underpinned by six key strategies.

These priorities and strategies will be reviewed as part of AgriFutures Australia’s annual industry review process. Further consultation and feedback will be sought from stakeholders to adjust or amend priorities.

Allocation of funding for these priorities will also be considered annually as part of AgriFutures Australia’s Annual Operating Plan (AOP). The AOP is available on the AgriFutures Australia website at http://www.agrifutures.com.au/about/corporate-documents/.
Strategy 1.1: Continuously focus on enhancing animal welfare outcomes

Justification
The demonstration of sound animal welfare practices is critical to the industry’s social licence to operate. The industry has a positive animal welfare story to tell, but it must be able to present the scientific evidence to support it. Ideally, the industry would gain endorsement of its animal welfare practices from a credible Australian or international organisation, and this is an industry aspiration – but the industry recognises the challenges of obtaining such endorsement.

Key performance indicators
- Scientific evidence is compiled and is a standard sufficient to gain third-party endorsement of the industry’s animal welfare practices.

Measurement
- Scientific evidence is available on the AgriFutures Australia website and is being accessed by industry participants and the general public.

Indicative activities
- 1.1.1 Compile the scientific information available on the industry’s animal welfare practices (desktop exercise).
- 1.1.2 Compare the animal welfare credentials of the kangaroo industry with other animal-based proteins.

Strategy 1.2: Demonstrate the sustainability credentials of the industry

Justification
The demonstration of sustainability is critical to the kangaroo industry having a social licence to operate. On welfare, the industry has a positive sustainability story to tell – in fact, sustainability is a key point of differentiation for kangaroo meat. However, consumers and the public are not generally aware of this message and are assailed by groups putting the opposing perspective.

Key performance indicators
- Scientific evidence on industry sustainability is compiled.

Measurement
- Scientific evidence is available on the AgriFutures Australia website and is being accessed by industry participants and the general public.

Indicative activities
- 1.2.1 Compile the scientific information available on the sustainability of the industry (desktop exercise) and develop a counterfactual piece of research – ‘What would the environmental and biodiversity impacts be if kangaroos were not humanely harvested?’
Strategy 1.3: Undertake effective communications and extension

**Justification**
There is a need for the outcomes from R&D within this Plan to assist with improving perceptions of the industry and product. Ongoing support for industry-funded R&D, and the adoption of its outputs, rely upon widespread awareness of the industry program and what it delivers for the industry.

**Indicative activities**
- 1.3.1 Distribute final reports and easily digestible summary information about activities undertaken.
- 1.3.2 Distribute updates on work being undertaken and progress made towards targets.
- 1.3.3 Undertake targeted market research to assess impacts on industry and product perceptions.

**Key performance indicators**
- Targeted market research shows an improved consumer perception of the industry and kangaroo products.
- 80% of stakeholders in the kangaroo industry are well-informed of the activities and outcomes of this Plan.

**Measurement**
- Market research data is available on the AgriFutures Australia website and is being accessed by industry participants and the general public.
- Stakeholder survey data shows 80% of kangaroo industry stakeholders are well-informed of the activities and outcomes of this Plan.

Strategy 2.1: Identify the nutritional value of kangaroo meat

**Justification**
Studies have been conducted on the nutritional attributes of kangaroo meat, and these have demonstrated health benefits such as low-fat content. There is an opportunity to conduct further studies that focus especially on micronutrients such as conjugated linoleic acid and omega-3 fatty acids, where preliminary data has shown positive results.

**Indicative activities**
- 2.1.1 Undertake nutritional studies on kangaroo meat.
- 2.1.1 Compile scientific information on the nutritional benefits of kangaroo meat to support marketing activities.

**Key performance indicators**
- Nutritional benefits of kangaroo meat have been identified for promotion by industry players.

**Measurement**
- Studies are published on the AgriFutures Australia website and disseminated, and are being accessed by industry participants and the general public.
Priority – The consumer appeal of kangaroo products is enhanced

Strategy 2.2: Demonstrate the food safety credentials of the industry

Justification
The kangaroo harvest involves a high standard of hygiene. Despite this, and especially because kangaroos are wild harvested, the industry must be able to demonstrate rigorous attention to, and achievement of, high standards of food safety. There are specific market access requirements (such as gamma irradiation to reduce microbial load in product exported into the US), and the suitability of kangaroo meat for interventions that enable market access must be established separately to that of other meats.

Indicative activities
• 2.2.1 Research the effects of gamma irradiation on kangaroo meat and other interventions as required for market access.
• 2.2.2 Promote the hygiene practices and food safety credentials of the kangaroo meat chain.

Key performance indicators
• Scientific data is generated to satisfy regulators that gamma irradiation is a safe treatment for kangaroo meat.
• Marketing activities demonstrate the whole-of-chain safety of kangaroo meat.

Measurement
• Industry regulators accept that gamma irradiation is a safe treatment for kangaroo meat.
• Information about the whole-of-chain safety of kangaroo meat is available on the AgriFutures Australia website and is being accessed by industry participants and the general public.

Strategy 2.3: Enhance value through improved product specifications

Justification
There is a standard set of cuts for kangaroo meat, but they are much less sophisticated than those of other meats, such as beef. In addition, there is little product grading to support marketing on the basis of cooking method or eating quality outcomes – like the type provided by Meat Standards Australia for beef and sheep meat. This constrains industry efforts to attract higher prices for premium kangaroo meat products, and increases the risk of a poor eating experience among consumers.

Indicative activities
• 2.3.1 Research the factors (cut, type of animal, area of origin) that affect the eating quality of kangaroo meat.
• 2.3.2 Review the approaches taken in other wild-kill industries to determine product specification and differentiation.
• 2.3.3 Develop a product specification and grading framework suitable for the industry.

Key performance indicators
• Product specifications are determined that support eating quality assurance claims.

Measurement
• Product specifications are available on the AgriFutures Australia website and are being accessed by industry participants and the general public.
Implementing the plan

It is critically important that the kangaroo industry has representation with AgriFutures Australia in the implementation of this Plan and the oversight of its performance.

With this in mind, the AgriFutures Kangaroo Program will have a Research Manager and Research Coordinator committed to it. The Research Manager will work with the Kangaroo Industry Association of Australia (KIAA) and other relevant stakeholders to implement and govern this Plan, run the RD&E open call process, assess project proposals and monitor project progress.

Where required, AgriFutures Australia will engage suitable expertise to ensure proposals align with, and help achieve, the priorities contained in this Plan.

In implementing this Plan, AgriFutures Australia and the KIAA will also:

- Encourage collaboration among harvesters, processors, stakeholders, researchers and government organisations.
- Progress the high-priority elements of the Plan.
- Communicate the progress and outputs of projects and how they achieve the priorities set out in the Plan.

Alignment with the AgriFutures Australia MER framework

A monitoring, evaluation and reporting (MER) framework developed for the Kangaroo Program is outlined in Table 6. The framework is aligned to the AgriFutures Australia MER framework, which provides a standardised 'logic' to describe how inputs are used to generate benefits from RD&E investments.

Measuring the progress of the industry and the Plan

Most outputs arising from this RD&E Plan will be in the form of research reports or product specifications (animal welfare, sustainability, nutritional value, food safety, product value) that can be used to effect change for the betterment of the industry. The exceptions are data on stakeholder awareness of industry activities and outcomes and targeted market research to determine whether industry developments have impacted perceptions. These would need to be captured by an industry survey and targeted market research, respectively.

Going forward, outputs arising from this Plan will also help AgriFutures Australia, KIAA and stakeholders with developing benchmarks to enable ongoing evaluation (e.g. with regards to public perception of the industry, product specifications and grading).

It is important that the Strategic RD&E Plan is reviewed periodically to assess whether satisfactory progress is being made to meet the identified KPIs, and whether the KPIs themselves are still the most appropriate ones. AgriFutures Australia will complete a mid-term review of the Plan towards the end of year three (2024). The outcomes of the review will be formally reported to stakeholders and an action plan implemented to rectify any deficiencies.

AgriFutures Australia will also complete a further review towards the end of the Plan. The outcomes of this review will be incorporated into the development of the 2026-2031 Plan.
### Monitoring, evaluation and reporting (MER) framework

#### Table 5: AgriFutures Kangaroo Program monitoring, evaluation and reporting (MER) framework

<table>
<thead>
<tr>
<th>Priorities</th>
<th>Indicative activities</th>
<th>KPIs</th>
<th>Measurement</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>• 1.1.1 Compile the scientific information available on the industry’s animal welfare practices (desktop exercise).</td>
<td>Scientific evidence is compiled and is a standard sufficient to gain third-party endorsement of the industry’s animal welfare practices</td>
<td>Scientific evidence is available on the AgriFutures Australia website and is being accessed by industry participants and the general public.</td>
</tr>
<tr>
<td></td>
<td>• 1.1.2 Compare the animal welfare credentials of the kangaroo industry with other animal-based proteins.</td>
<td>Scientific evidence on industry sustainability is compiled.</td>
<td>Scientific evidence is available on the AgriFutures Australia website and is being accessed by industry participants and the general public.</td>
</tr>
<tr>
<td></td>
<td>• 1.3.1 Distribute final reports and easily digestible summary information about activities undertaken.</td>
<td>Targeted market research shows an improved consumer perception of the industry and kangaroo products. 80% of stakeholders in the kangaroo industry are well-informed of the activities and outcomes of this Plan.</td>
<td>Market research data is available on the AgriFutures Australia website and is being accessed by industry participants and the general public.</td>
</tr>
<tr>
<td></td>
<td>• 1.3.2 Distribute updates on work being undertaken and progress made towards targets.</td>
<td>Stakeholder survey data shows 80% of kangaroo industry stakeholders are well-informed of the activities and outcomes of this Plan.</td>
<td>Stakeholder survey data is available on the AgriFutures Australia website and is being accessed by industry participants and the general public.</td>
</tr>
<tr>
<td></td>
<td>• 1.3.3 Undertake targeted market research to assess impacts on industry and product perceptions.</td>
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<td></td>
</tr>
</tbody>
</table>

#### Priorities 2

<table>
<thead>
<tr>
<th>Indicative activities</th>
<th>KPIs</th>
<th>Measurement</th>
</tr>
</thead>
<tbody>
<tr>
<td>• 2.1.1 Undertake nutritional studies on kangaroo meat.</td>
<td>Nutritional benefits of kangaroo meat have been identified for promotion by industry players.</td>
<td>Studies are published on the AgriFutures Australia website and disseminated, and are being accessed by industry participants and the general public.</td>
</tr>
<tr>
<td>• 2.1.2 Compile scientific information on nutritional benefits of kangaroo meat to support marketing activities.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• 2.2.1 Research the effects of gamma irradiation on kangaroo meat and other interventions as required for market access.</td>
<td>Scientific data is generated to satisfy regulators that gamma irradiation is a safe treatment for kangaroo meat.</td>
<td>Industry regulators accept that gamma irradiation is a safe treatment for kangaroo meat.</td>
</tr>
<tr>
<td>• 2.2.2 Promote the hygiene practices and food safety credentials of the kangaroo meat chain.</td>
<td>Marketing activities demonstrate the whole-of-chain safety of kangaroo meat.</td>
<td>Information about the whole-of-chain safety of kangaroo meat is available on the AgriFutures Australia website and is being accessed by industry participants and the general public.</td>
</tr>
<tr>
<td>• 2.3.1 Research the factors (cut, type of animal, area of origin) that affect the eating quality of kangaroo meat.</td>
<td>Product specifications are determined that support eating quality assurance claims.</td>
<td>Product specifications are available on the AgriFutures Australia website and are being accessed by industry participants and the general public.</td>
</tr>
<tr>
<td>• 2.3.2 Review the approaches taken in other wild-kill industries to determine product specification and differentiation.</td>
<td></td>
<td></td>
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<tr>
<td>• 2.3.3 Develop a product specification and grading framework suitable for the industry.</td>
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