AMPC

AUSTRALIAN MEAT PROCESSOR CORPORATION

Annual Operating Plan 2024–2025

Prioritising a stronger red meat processing industry


Saddleworld
GYMPIE
More to meat
than meets the eye
PREMIUM
SIRLOIN STEAK

The Australian Meat Processor Corporation (AMPC) is the specialist research and development corporation for the red meat processing industry in Australia.

We are the red meat processing industry's trusted partner in innovation and our purpose is to invest in research and development and marketing initiatives that improve the competitiveness, profitability and sustainability of our industry.

Investments are funded by statutory levies, partner contributions, and the Australian Government and are designed to deliver a range of benefits for the industry and the broader Australian community.

AMPC engages with leading research organisations and marketing providers and funds joint activities with our value-chain partners to address the priorities of the red meat processing industry.

Many of AMPC's investments are multi-year projects in strategic areas where we have invested in previous years.

Our funding decisions are underpinned by active consultation with the red meat processing industry, and seek to maximise benefits across the industry broadly.

In 2024–25 we are focussing on increased participation and collaboration on R&D activities and facilitating greater uptake and adoption.

Our 2024–25 annual operating plan outlines our activities during the year and aligns to our five-year strategic plan.

Contents

Advanced manufacturing

STRATEGIC ASPIRATION

Human product handling is halved through technology advancement to reduce injury rates, maximise yield and processing efficiency by 2030.

Hands-off processing

PLANNED ACTIVITIES

Remote operation processing

- Continue evaluation of potential technologies that enhance remote operation capabilities enabling staff to operate equipment remotely opening the employment demographic to employees of any age, physical strength, and ability.
- Progress current development of remote operated shadow robotics from in-plant evaluation of early working prototypes to production capable systems.

Manual handling

- Evaluate and test a range of automated guided vehicle technologies on processing sites to determine potential uses and promote industry adoption.
- Validate automated container loading beta prototype development in a production environment and progress to gamma prototype and commercialisation.
- Validate automated primal packing solutions prototype developments in production environments and progress adoption of solutions.
- Development and in-plant evaluation of new automated bagging and packing solutions.
- Further evaluate magnetic conveyor technologies in production environments.

Automated boning

- Working with global technology providers to develop and evaluate multiple beef boning proof-of-concepts and prototype systems focussed on addressing skilled labour needs and improving work, health, and safety.
- Evaluate proof-of-concepts and prototype trials on-site of automated lamb boning and cutting solutions.

Automated processing

- Working with global technology and industry partners, re-evaluate and roadmap automated harvest floor automation developments.
- Install and evaluate emerging automated beef harvest floor solutions developed globally.
- Evaluate and test collaborative robotic technologies on processing floor environments to determine applicability to industry.
- Investigate new technologies and concepts that support high throughput processing and automation.

KPIs
☐ Successfully demonstrate at least two remote operated shadow robot systems in production.
☐ Increase the awareness of the value proposition of emerging manual handling solutions to a minimum of 60 per cent of processors.
☐ Demonstrate extension of all completed project outcomes.
☐ At least one new automated beef harvest floor system developed for installation in production.
☐ Two new concepts developed to support high throughput requirements for lamb processing automation.

Adoption

PLANNED ACTIVITIES

Adoption

- Encourage and support processors to adopt economically viable technology.
- Implement integrated decision support tools and systems to improve production insights and processor profitability.
- Develop and implement tools and systems to assist processors evaluate R&D and adoption of advanced manufacturing innovations.
- Evaluate adoption of past R&D to encourage processors to adopt technology and explore different funding models.
- Assist processors to access external funding to enable technology adoption.

KPIs

- [ ] Adoption of integrated decision support tools at five processing sites.

Digitisation

PLANNED ACTIVITIES

Industry 4.0 — the internet of things

- Encourage technology providers to develop equipment with Industry 4.0 capabilities and encourage processors to adopt Industry 4.0 capable technologies.
- Assist on-site integration of systems across meat processing plants to enable data analytics for better management, incorporating machine learning and AI technologies.
- Continue trials at processing plants using artificial intelligence tools for systems and equipment maintenance.
- Validate use of improved digital photorealistic visual technologies, in association with 3D rendered visualisation 'digital twins' and simulated operational production systems.
- Develop and evaluate processing performance improvement and decision tools to access real-time real time data to improve supply chain profitability.

KPIs

- [ ] Outline the value proposition of digital technologies to at least 20 processors.
- [ ] Deliver at least one new performance improvement and decision tool demonstrated in production.

Carcase primal profitability optimisation

PLANNED ACTIVITIES

Automated yield optimisation

- Progress beef automation working with industry partners including MLA, processors, and global technology providers.
- Development and evaluations of early working prototypes for automated trimming.
- Evaluate proof-of-concepts and prototypes trials on-site of automated lamb boning solutions focussed on yield recovery.
- Address barriers for adoption and evaluate impact including development for automation of 'rinse and chill technologies.
- Further development and installation of non-X-ray and AI enhanced automated solutions.
- Progress development new sensing technologies to enhance yield and automation opportunities.

Objective carcase measurements

- In partnership with MLA, encourage and support processors to evaluate and implement new objective measurement technologies including process automation driven by objective measurement tools.
- Further develop full carcase contamination detection tools to determine on plant production suitability for online processing, automation and production.
- Continue to support processors to evaluate and implement carcase cut calculator and optimisation tools.

Boning room traceability

- Evaluate and further develop new automated carcase traceability and sortation technologies.
- Further develop and test new automated sensing and AI technologies to identify, verify products and cartons, to enhance traceability, packing validation, and automated packing capabilities.

KPIs

- [ ] At least one new automated fat trimming concept evaluated with industry for further development.
- [ ] One lamb and one beef automated 'rinse and chill' system developed and in production for trials.
- [ ] At least two automated robotic AI enabled beef scribing systems operating in full production.
- [ ] One new sensing technology to enhance yield and automation opportunities in development.
- [ ] Two new sensing and AI technologies that enhance production.

Sustainability

STRATEGIC ASPIRATION

By 2030, Australian processors are recognised as global leaders in environmental stewardship and acknowledged as responsible businesses with positive economic and social impacts on their communities.

Water

PLANNED ACTIVITIES

Waterless knife solutions

- Development, testing, validation, and verification of low temperature sterilisation solutions to reduce water and energy used in knife sanitisation.

Water, energy, and chemical efficiency in plant cleaning

- Centralised cleaning systems for efficient management of water, energy, chemicals, and work-safe practices.

Pathway to "fit-for-purpose" water recycling (phase 2)

- Establish a pathway for a feasible fit-for-purpose approach to direct planned potable water recycling.

KPIs
☐ Trial two alternative knife sterilisation technologies to reduce water consumption.
☐ Pathway for utilisation of recycled potable water adopted by industry and regulators.
☐ 65 per cent of red meat processing industry measures plant annual water intensity.
☐ Five per cent per annum reduction in red meat processing industry water intensity by 2025 through water efficient practices and technologies.
☐ 10 per cent of red meat processing industry has best practice water stewardship by 2025.
☐ 20 per cent of red meat processing industry has advanced water recycling in place by 2025.

Energy

PLANNED ACTIVITIES

Superior energy efficient refrigeration

- Demonstrate the value of Industry 4.0 technology, enabling adoption of a novel energy efficiency service (*Refrigeration as a Service Phase 2*), using deep learning and smart management for planned refrigeration efficiencies, cost savings, and carbon reduction.

Electrification and thermal energy efficiency

- Further assessment, design, and adoption of heat pump technologies and more efficient thermal energy management.

Working with hydrogen and hybridised renewables

- Pilot project to scope, design, and demonstrate a hybridised system utilising hydrogen, solar PV, storage, and an energy management system for renewable electricity. The pilot will offset fossil fuel use and future costs for "at demand" renewable electricity tasks (e.g. peak shaving and demand management).
- Further development of the *AMPC Clean Fuels and Heavy Transport Emissions Roadmap*.

KPIs
☐ Demonstrate one hybridised renewable electricity system using hydrogen and solar PV.
☐ 70 per cent of red meat processing industry measures annual energy intensity.
☐ 10 per cent per annum reduction in energy intensity by 2025 through energy efficient practices and technologies by 2025.
☐ 30 per cent of red meat processing industry renewable electricity by 2025.
☐ Five piloted clean alternatives to fossil fuels for process heat by 2025.

Communities

PLANNED ACTIVITIES

Social impact

- Establish a social impact measurement for the red meat processing industry to help communities better understand red meat processor role and value.

Monitoring and management product emissions

- Pilot project to design, test, and modify monitoring and management technology for processor supply chain emissions.

Market imposed environmental disclosures

- Develop case studies for disclosure procedures around product and operational environmental footprints (on emissions, biodiversity, deforestation, and climate related financial disclosure).
- Conduct the *2024 AMPC Environmental Performance Review* (EPR) on the red meat processing industry that contributes to the Australian Beef Sustainability Framework and the Australian Sheep Sustainability Framework.

Emissions, energy, and water benchmarking

- Compete individual benchmarking and improvement workshops to members who complete the *2024 AMPC Environmental Performance Review*. Case studies with public recognition of top performers will be developed.

Funding and new business models for decarbonisation

- Strategic focus on the development of new business and funding models, towards the $2bn red meat processing industry investment hurdle required to achieve CN30.

More to Meat campaign

- Defend the reputation and improve the positioning of Australia's red meat processors amongst key decision makers and stakeholders.
- Campaign objectives:
  - Grow support for the industry in local processor communities
  - Advance the sector's performance on key reputational metrics
  - Neutralise detractors and reduce the salience of issues that drive opposition to the industry
  - Support employee recruitment and retention in local communities
  - Support operational goals

KPIs

- ☐ At least 35 processors participate in the *2024 AMPC Environmental Performance Review*.
- ☐ 70 per cent of the red meat processing industry is reporting emissions.
- ☐ Deliver facts and science that support monitoring, disclosure, and management of emissions.
- ☐ AMPC (or key members) has met and briefed key ministerial offices on the industry's issues and all relevant ministers understand the value of the industry to jobs and the economy.
- ☐ Evidence of public support from key MPs who represent electorates with red meat processors.
- ☐ Evidence of support from several key peak industry bodies to advocate for red meat processing.
- ☐ AMPC has published positive stories in at least every region (15 markets) and every state the campaign is active in.

Waste

PLANNED ACTIVITIES

Bio-hubs and bio-resource recovery centres

- Adoption projects to establish the sectors first bio-hubs and circular economy research centres.

Wastes to value

- Implement a project to assess, design, and test optimal aggregation model/s for processor and industry bio-solid wastes management to create improved regional applications (e.g. soil improvement and carbon sequestration).

KPIs

- ☐ Support the establishment of one bio-resource recovery hub
- ☐ Demonstrate a reduction in red meat processing industry solid waste to landfill by June 2025.
- ☐ Four feasible piloted alternatives by June 2025 for solid/liquid waste treatment.

People and culture

STRATEGIC ASPIRATION

By 2030, the processing sector is seen as a diverse, safe and attractive industry of choice for employment.

Attraction

PLANNED ACTIVITIES

Skilled migrant workers

- Deliver a transparent and ethical skilled meat worker pathway between Southeast Asia and Australia to enhance meat worker suitability and engagement.
- Develop resources to support migrant maintenance workers in Australian safety standards.

Schools program

- Develop and evaluate the effectiveness of a secondary schools' program aimed to increase student and teacher engagement and understanding of the Australian red meat processing industry career opportunities.
- Develop and evaluate the effectiveness of a 'meat tech' futures program targeting Science, Technology, Engineering and Mathematics (STEM): highlighting professional processing careers opportunities focusing on STEM based roles.
- Evaluate and report on student and teacher perceptions of the red meat processing industry.

Careers portal

- Deliver the first iteration of a careers portal that highlights the diversity of career opportunities in the red meat processing industry.

Intercollegiate Meat Judging (ICMJ)

- Support the ICMJ program to promote the red meat processing industry.

Food and fibre education strategy

- Support cross-RDC collaborative development of the food and fibre education strategy to boost attractiveness of agricultural supply chain education and careers.

Attracting new cohorts of employees to industry with the aid of remote operations

- Attracting and identifying new employees to the opportunities in the red meat processing industry using and operating technology remotely.

Understanding First Nation and minority groups employment levels

- Identify and analyse levels of First Nation and minority groups employment participation in the red meat processing industry, better understand where the challenges and opportunities lie, identify and boost practical strategies, develop resources, and share success stories.

KPIs
☐ Understand the current employment practices and attraction and retention rates, as they relate to First Nation and migrant workers and complete a roadmap to improve attraction and retention rates.
☐ Deliver at least four 'meat tech' events by June 2025 with a minimum 70 per cent satisfaction rating by attendees.
☐ Attend ICMJ events achieving a minimum 70 per cent event satisfaction rating on AMPC content by attendees.

Retention

PLANNED ACTIVITIES

Safety professionals

- Develop a strategic roadmap to improve the retention and knowledge of safety professions across industry.

Leadership initiatives

- Support dedicated programs to grow individuals into leadership roles at varying leadership levels across industry.

Machine learning as a tool to improve retention

- Refine machine learning algorithms using data to improve retention of employees. The program will be trained to identify risk in employees leaving.

KPIs

- [ ] Validate machine learning models to improve retention in five processing plants.

Development

PLANNED ACTIVITIES

Innovation managers program

- The role of this program is to drive innovation within plants through increased research, development, capability building, and evaluate practice change.

Update of meat inspection training resources

- Develop materials that support the new requirements of the meat inspection training package including a virtual reality support tool.

Knowledge hub

- Development of the architecture for stage 2 of the knowledge hub — providing a centralised location for learning content and resources.

Create industry induction content designed for migrant workers

- Develop a suite of resources to support industry with the onboarding of foreign workers around practical advice when first moving to Australia including basic customs, laws, and safety regulation.

KPIs

- [ ] Implement workshops to encourage development and networking of industry achieving a minimum 70 per cent event satisfaction rating by attendees.
- [ ] Implement a knowledge hub for industry with 70 per cent satisfaction by industry.

Safety and wellbeing

PLANNED ACTIVITIES

Psychosocial hazards

- Conduct a research project to determine psychosocial hazards in the Australian red meat processing industry and support employers in the industry to understand and address safety insights.

Work, health and safety industry uplift 2024

- AMPC will provide and evaluate ongoing training and education in workplace health and safety and keep members up-to-date with current legislation.

Artificial intelligence and the role in safety

- Pilot technologies that use AI to understand their potential role and applications in the red meat processing industry.

Safety and wellbeing of migrant workers

- Identify and analyse safety statistics related to migrant workers, better understand where the challenges and opportunities lie, identify and boost practical strategies, develop resources, and share success stories.
- Research on uptake and outcomes following the launch of the code of conduct — a one year post implementation review.

Improving safety across the red meat processing industry

- Identify, evaluate and consult with the red meat processing industry on different safety programs to be considered for an industry-wide safety improvement campaign aimed at reducing incidents across industry.
- Establishment of a safety research and development reference committee.

KPIs

- [ ] Engagement of a minimum of eight processors for psychosocial hazard related projects.
- [ ] Deliver a project driven snapshot on a minimum of two AI related safety tools.

Technical market access and markets

STRATEGIC ASPIRATION

By 2030, Australia is the preferred trading partner for premium red meat products globally, with unrivalled access to high value markets.

Marketing and promotion

PLANNED ACTIVITIES

Marketing and promotion

- AMPC provides funding to MLA as part of a joint industry investment program to fund important industry and product marketing, and promotional activities for the domestic and international markets.

International competitiveness

PLANNED ACTIVITIES

Reduce regulatory costs

- Work with the Department of Agriculture Fisheries and Forestry to develop an information sharing platform for regulators to reduce export costs such as in-country audits.
- Assess rationale behind freezing temperature of –18 degrees Celsius and whether stakeholders are likely to agree to –12 degrees.
- Develop an IT client management system that facilitates the management of consignments.

KPIs

- [ ] A science-based submission is provided to regulators to support a change in freezing temperature.
- [ ] Uptake of IT client management system by 20 per cent of small or cooperative processors.

Market access

PLANNED ACTIVITIES

Improved market access

- Trial the use of bar codes as shipping marks for exports to the US.
- Investigate residue detections that threaten market access.
- Assess technology to support provenance claims.

KPIs

- [ ] A submission is developed to gain US acceptance of bar codes as shipping marks.
- [ ] 80 per cent of exporting members uptake of new US shipping bar codes by 2026.
- [ ] Identify and evaluate at least one technology to support providence claims.

Products

PLANNED ACTIVITIES

Value-added products

- Investigate options for collagen extraction from sheep hides, other sheep products, and beef products other than hides.
- Understanding the role beef plays in human nutrition through the investigation of mineral and fatty acid content of beef.
- Support processors to realise the value of objective measurement technologies.
- Investigate options for use of products currently rendered e.g. beef feet.

KPIs
☐ At least two commercial opportunities are available for processors to extract collagen from sheep skins and/or beef hides.
☐ Provide preliminary report of human nutritional values of red meat.
☐ Increase the value of at least one material currently rendered by 50 per cent.

Product and process integrity

STRATEGIC ASPIRATION

The Australian red meat industry maintains and further enhances its international reputation for safe, sustainably sourced, wholesome red meat products.

Traceability and integrity systems

PLANNED ACTIVITIES

Improve traceability at receival and packing

- Continue to investigate technology to verify primal identification, product labels, and box labels.
- Trial alternative hardware and software for small stock EID (electronic identification).
- Assess and compare artificial intelligence systems to monitor, count and trace livestock.

KPIs
☐ Develop and evaluate two new technologies to improve traceability through the boning room.
☐ Assess and compare EID hardware and software for smallstock aiming at target regulatory accuracy.
☐ Evaluate two new EID technologies for smallstock.

Animal welfare

PLANNED ACTIVITIES

Improve animal welfare outcomes

- Continue to evaluate the stealth knocking box project to assess animal welfare and meat quality outcomes.
- In conjunction with the stealth knocking box project, stunning methods will be reviewed including:
  - Identify and assess new stunning technologies that meet regulatory requirements.
- Continue to support the Diathermic Syncope® (DTS) project as an alternative stunning method, including through presentations to trading partners and commercial organisations.
- Assess camera technology and artificial intelligence to monitor animal welfare outcomes.
- Support members to improve animal welfare outcomes.

KPIs
☐ One new cattle stunning technology is evaluated with outcomes available to processors.
☐ Assessment of one artificial intelligence technology to support good animal welfare outcomes in the lairage.
☐ Deliver at least one webinar to highlight AMPC research outcomes on animal welfare.

Food safety

PLANNED ACTIVITIES

Microbiological and hygiene risk-based process monitoring

- Develop a revised microbiological and hygiene risk-based process monitoring system to deliver reduced costs for compliance and reflect the broad change in industry to implement risk-based inspection suitable for their business.

Foodborne bacterial pathogens

- To understand the prevalence foodborne bacterial pathogens such as salmonella and *Shiga Toxin-producing Escherichia Coli (STEC)* in the Australian red meat processing industry AMPC will:
  - start a baseline study of salmonella prevalence in the Australian herd.
  - determine the prevalence of *STEC* in Australian red meat products.

Heavy metal detection in offal

- Continue work on the validation of spectroscopy technology for detecting cadmium residues in beef livers to enable processors to differentiate livers that are suitable for human consumption and those that have unacceptable cadmium levels.
- Proof of concept using spectroscopy technology for detecting cadmium residues in sheep livers.

Shelf-life studies

- Continuing shelf-life studies of chilled lamb in several different packages to help members in packaging choices for lamb.

Managing microbial load

- Development of a lamb hotwash tunnel to manage microbial load.
- Assess alternative knife sterilisation options to the current requirement of 82 degrees celsius.

KPIs

- [ ] Deliver a risk-based approach to process monitoring and adopted by regulators.

Engagement and extension activities

AMPC has an overarching stakeholder engagement framework which sets out principles guiding AMPC's engagement processes.

AMPC has executed stakeholder engagement agreements with Meat and Livestock Australia (MLA) and the Australian Meat Industry Council (AMIC) which set out shared behaviours, principals of engagement and principals for matched funding and joint activities.

AMPC has a twice per year consultation model where industry input is provided, and AMPC presents its progress.

AMPC engages with government through regular meetings with the Department of Agriculture, Fisheries and Forestry, and CEO meetings with the minister.

Our framework is available on the **AMPC website**.

AMPC plans to attend industry events in the 2024–25 year including EvokeAg, Meat Business Women annual conference and ABARES, and will showcase our R&D at LambEx in Adelaide in August 2024.

AMPC plans to host its second AMPC Innovation Showcase event in September 2025 bringing together the red meat processing industry and stakeholders to showcase AMPC's R&D. AMPC also plans to begin hosting regional events in 2024 called 'AMPC Innovation Spotlight events' highlighting R&D to encourage adoption.

Our team of regionally based co-innovation managers will continue to engage directly with processing plants throughout 2024–25.

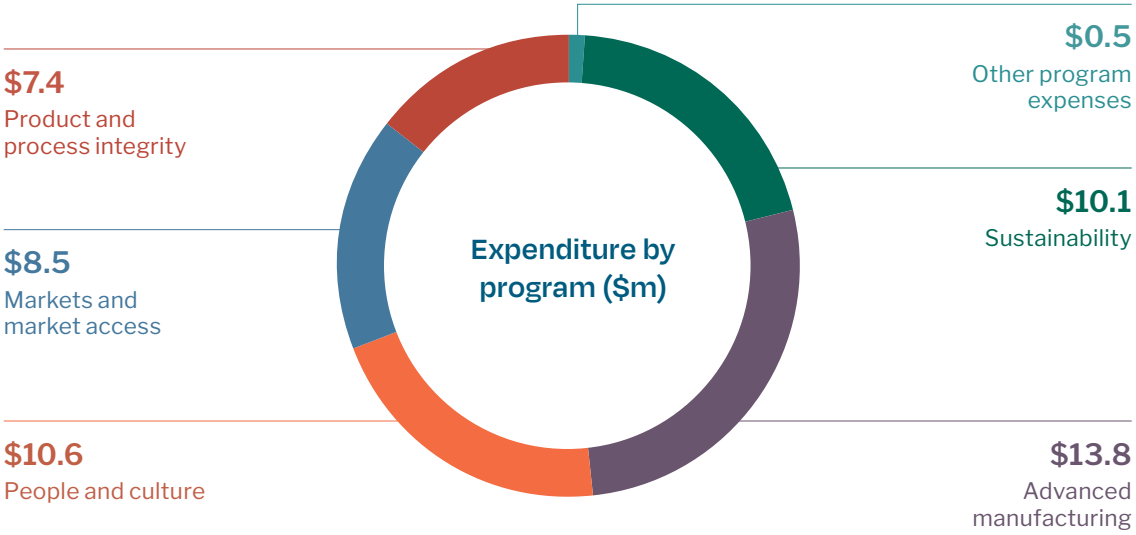
Our CEO will visit industry CEOs in his annual roadshow to determine their needs.

AMPC Innovation Spotlight Events

Our co-innovation managers will run a series of regional events during 2024–25 where AMPC will highlight R&D from each of it's program areas. Program managers will present on their research outlined in previous pages of this plan.

NSW	September 2024	**SA**	May 2025
QLD	October 2024	**WA**	April 2025
VIC	February 2025	Dates are indicative.	

Balanced portfolio



Budget

Income	RD&E	Marketing	Total
Levies	$12,551,338	$8,367,559	$20,918,897
Interest	$338,457	$225,638	$564,096
Government matching	$21,252,027	—	$21,252,027
Partner contributions	$13,985,070	$250,000	$14,235,070
Total	**$48,126,892**	**$8,843,197**	**$56,970,089**

Expenditure	RD&E	Marketing	Total
Advanced manufacturing	$13,821,837	—	$13,821,837
Sustainability	$7,643,782	$2,500,000	$10,143,782
People and culture	$8,977,937	$1,615,661	$10,593,598
Markets and market access	$4,650,966	$3,807,751	$8,458,716
Product and process integrity	$6,102,355	$1,262,030	$7,364,385
Other program expenses	$46,800	$500,000	$546,800
Total	**$41,243,677**	**$9,685,442**	**$50,929,118**

Corporate costs	RD&E	Marketing	Total
Corporate member services	—	$550,000	$550,000
Direct corporate costs	$3,694,672	—	$3,694,672
Indirect corporate costs	$2,349,516	$1,566,344	$3,915,860
Total	**$6,044,188**	**$2,116,344**	**$8,160,532**

Reserves movements	RD&E	Marketing	Total
Opening reserves	$9,363,080	$9,119,821	$18,482,901
Budget net income	$839,028	-$2,958,589	-$2,119,561
Closing reserves	**$10,202,108**	**$6,161,233**	**$16,363,340**

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