



LIVECORP

THE AUSTRALIAN LIVESTOCK
EXPORT CORPORATION



The LEP RD&E Program

Research projects 2024-25



The Livestock Export Program (LEP) is a collaboration between LiveCorp and Meat & Livestock Australia that invests in research, development and extension (RD&E) activities to enhance the livestock export industry's productivity, sustainability, and competitiveness.

The Blueprint

Investments made by the LEP RD&E Program are guided by the RD&E Blueprint, a five-year guide for targeting investment to ensure it is contributing to livestock export industry goals and advancement.

A key driver for the Blueprint was the desire from both industry and R&D providers for greater clarity on what the LEP RD&E Program seeks to achieve.

The Blueprint was developed from extensive consultation with livestock producers and exporters to provide visibility and clarity on their priorities for funding. There is also a need to balance short and long-term projects; and practical outcomes with projects to increase the scientific knowledge base.

LiveCorp and Meat & Livestock Australia acknowledge the provision of funding by the Australian Government and levy payers to support the research and development detailed in this publication.

Read the LEP RD&E Blueprint via the QR code below.



Current projects

Understanding community sentiment - Phase 2

The livestock export industry has a complex relationship with the community. A series of national surveys has found strong recognition of the industry's contribution to the Australian economy and to nutrition overseas, along with continued concern over animal welfare.

This project will extend the series, based on a scientific methodology and run through an independent third party. Reports will be published following each survey. The results are already helping to understand the community's views on various facets of the industry and highlight the areas of focus to build trust and acceptance over time.

ROLL OUT DATE: ANNUALLY UNTIL 2027

Enhancing cattle welfare: bedding, lameness, and thermal comfort

Continuous improvement in the welfare of cattle during live export voyages is a priority for the industry and community. Although mortality and morbidity numbers are exceptionally low, this project will identify further enhancements in key welfare areas such as bedding management and thermal comfort on board, and lameness prevention and treatment.

ROLL OUT DATE: MARCH 2026

Interpreting animal welfare

The industry has been collecting specific and meaningful indicators developed through previous research to monitor animal welfare outcomes on livestock export ships. This project is taking the next step, creating a model capable of accurately interpreting and aggregating intricate animal welfare data. This will offer insights into animal welfare during voyages and allow post-voyage analysis and benchmarking to support continuous improvement.

ROLL OUT DATE: JUNE 2026

Indonesian dairy supply

Indonesia's dairy sector, with a herd of approximately 500,000 cattle, meets only 23% of domestic milk demand. This project will undertake a desktop study to evaluate opportunities for supplying Australian dairy cattle to Indonesia. The primary focus will be on identifying, collating, and sharing information and resources held within Australian bodies and institutions to assist Indonesia's efforts to deliver its Nutritious Meals Program.

ROLL OUT DATE: AUGUST 2025



Open Innovation Pipeline

The Open Innovation Pipeline has been developed to allow multiple, small-scale trials which leverage existing technologies from other sectors. This meets the industry's desire for practical and fast solutions to supply chain challenges, with a focus on improving animal welfare and supply chain efficiency. Proof-of-concept trials are being advanced with potential solutions identified by an innovation scout.

ROLL OUT DATE: ONGOING

Managing effluent produced by livestock export vessels

Research has identified that environmental sustainability and stewardship of the land and sea are among the most important factors for agricultural sectors seeking to build community trust. Washing manure and bedding materials into the sea from livestock export ships is an important component of effectively managing animal welfare. It is also highly regulated under international law to address environmental and biosecurity risks. This project is proactively investigating ways to manage these processes to further minimise environmental risk and meet community expectations.

ROLL OUT DATE: APRIL 2025

Preparations for the ASEL 4.0 review

The Australian Government has flagged a comprehensive review of the Australian Standards for the Export of Livestock (ASEL) in 2025-26. This project provides an opportunity to research topics that will likely be considered, and those of interest to industry, and gather evidence and information related to them. This will support the effective use of available research outcomes, data, and industry information to contribute to the development of evidence based and best practice regulation.

ROLL OUT DATE: MAY 2025

Life cycle carbon assessment of the livestock export supply chain

With the increasing focus on carbon emissions by the community, trading partners and government, this project is updating a 2011 life cycle assessment of the supply chain to current standards. This includes specifically examining carbon emissions and greenhouse gases, strengthening the industry's understanding of its performance and identifying opportunities to pursue and promote improvements.

ROLL OUT DATE: MARCH 2025

ESCAS review and support

The department is conducting a review of the Export Supply Chain Assurance System (ESCAS). This project will support the development of industry's technical contributions of the review, aimed at achieving improvements to ensure it remains an effective and efficient regulatory framework. The project will also examine the potential roles and activities industry bodies could undertake to support the system.

ROLL OUT DATE: OCTOBER 2025

Livestock export industry regulatory reform strategy

The livestock export industry operates within a highly regulated environment designed to ensure animal welfare and compliance. This project aims to develop a comprehensive livestock export industry regulatory reform strategy and implementation plan to provide a long-term vision for regulatory improvement, ensuring a balance between effective compliance and operational efficiency.

ROLL OUT DATE: NOVEMBER 2024



Current projects *(continued)*

Contribution of live exports to international development goals

Community sentiment research has shown that the benefits that the livestock export industry provides to destination markets is a key driver of trust and acceptance. However, communicating these benefits has relied largely on qualitative data, anecdotal evidence and case studies. This project aims to quantify the socio-economic value of the trade against international sustainability reporting frameworks and development goals.

ROLL OUT DATE: JUNE 2025

Benchmarking the cost competitiveness of Australia's live cattle export supply chain

Australia is a significant player in the global live cattle export market, but increasing competition makes it essential to continually assess and enhance the profitability and cost competitiveness of the supply chain. This project will focus on benchmarking the Australian industry's business cost structures, logistics efficiency, and cost of regulatory compliance against the supply chains of key international livestock and red meat competitors.

ROLL OUT DATE: MARCH 2026

Optimising Australia's live cattle export supply chain for global competitiveness

To stay competitive in the global live cattle export market, we must enhance the efficiency of Australia's supply chain and boost profitability. This project will analyse feedlot and abattoir operations, explore full carcass value (including non-meat products), and identify ways to improve efficiency and profits. It will also investigate the preferences of in-market importers to help Australian exporters meet market demands.

ROLL OUT DATE: MARCH 2026



RD&E Blueprint priorities

Goal 1

Greater transparency of animal health and welfare in the supply chain

Ensure the processes are in place to:

- Build industry capability in data collection and analysis to enable benefits from transparency, benchmarking, reduced subjectivity, boosted supply chain productivity and efficient regulatory reporting to be achieved.
- Better understand and aim to address public expectations of animal health and welfare in the supply chain.
- Develop tools and techniques for more effective and timely identification and assessment of animal health and welfare, and promote their uptake and adoption.

Goal 2

Understanding and addressing animal health and welfare risks in the supply chain

Ensure the processes are in place to:

- Improve understanding of, and identify effective controls for, animal health and welfare risks that operate along the supply chain, including in overseas markets, along with timely prevention management strategies.
- Characterise farm-level influences and pre-ship

risk factors that affect animal welfare through focused collection and analysis of pre-ship data.

- Characterise infrastructure, environment and management factors that impact animal health and welfare on ships through focused collection and analysis of ship-level data.

Goal 3

Improving the uptake, adoption and commercialisation of better animal health and welfare practices and tools

Ensure the processes are in place to:

- Improve the training environment to encourage uptake of leading animal health and welfare practices across industry.
- Facilitate better stunning outcomes through the uptake and use of industry leading tools and practices.
- Support and promote the adoption of better health and welfare practices in market, including understanding the cultural and social factors affecting animal handling practices.

Goal 4

Improving supply chain efficiency and regulatory performance

- Expand and enhance information exchange along the

supply chain, improve industry capability in data collection and facilitate automated reporting.

- Enhance supply chain risk identification, assessment and management capability across regions, species and environmental factors in a way that supports a risk-based regulatory approach.
- Facilitate feedback of information on the health and welfare of livestock supplied to live export by producers and suppliers and provide actionable feedback on how welfare outcomes in the livestock export supply chain can be improved.

Goal 5

Supporting better market access conditions for Australian producers and exporters

- Provide stakeholders with knowledge of trends, preferences and expected market requirements that can inform their business practices.
- Improve industry knowledge and inform participants of the risks and opportunities within the supply chain.
- Support better exporter and importer control and assurance over animals in market to reduce the risks of leakage and poor animal welfare outcomes.

Completed projects

Project Partnership in bedding, ammonia, and stocking density

For livestock exported by sea, the number of animals in a pen, the condition of their bedding, and the amount of ammonia in the air can all potentially influence welfare and performance. These factors are interdependent in many ways, and a long-term project partnership between the industry and the University of New England took a holistic approach to researching this topic. Results from multiple land-based trials have been validated at sea and peer-reviewed research papers have been published in journals.



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Gas monitoring

As part of the Open Innovation Pipeline, this project trialled autonomous technology used in poultry and pig transport for use on livestock export ships to monitor potentially harmful gases like ammonia, carbon dioxide, and carbon monoxide, alongside temperature and humidity. Nine four-in-one sensors were installed on two livestock export voyages to assess their ability to provide reliable and continuous data for real-time monitoring, and potential early intervention to enhance human and animal safety and welfare. The sensors worked effectively and showed ammonia levels consistently below 25 ppm.



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Data standards

The industry is increasingly collecting data to meet regulatory obligations, support research projects and allow analysis and decision making to drive animal welfare gains and commercial outcomes. With the supply chain progressively looking to data use and digital transformation, this project helped create a common understanding of how data should be stored and exchanged across different systems.



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Cattle counting and weighing AI

As part of the Open Innovation Pipeline, this project trialled a sophisticated artificial intelligence (AI) visual recognition system, to automate cattle counting and weight estimation in livestock export facilities. The trial focused on a cattle race to enhance the technology's potential for implementation at livestock export loading and unloading sites, including ships. The AI system demonstrated 95% accuracy in weight estimation and 98% accuracy in cattle counting.



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Understanding community sentiment – 2024 report

A series of surveys has been conducted to understand community sentiment toward livestock exports. In 2024, this included questions around information sources, which showed a desire for more balanced coverage of the industry. Trust and acceptance of the industry recorded their highest levels.



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Exotic animal disease preparedness

As part of efforts to increase the industry's capacity to respond to an exotic animal disease incursion, this project developed protocols and materials to support ship owners and exporters manage livestock in transit. These resources include practical guidance on biosecurity, standard operating procedures and communication, along with templates and checklists to streamline responses while ensuring animal welfare and regulatory compliance.



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Shipboard stockperson training course review

To ensure shipboard stockpersons entering the industry have the necessary skills, capability and knowledge to conduct their responsibilities to a high standard, the training course has been reviewed and the training materials updated. The course covers Australian livestock export regulations, animal health, and life on board. Additionally, the project has developed practical resources tailored to the unique challenges of the at-sea environment.



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