AUSTRALIAN PORK INDUSTRY RESEARCH AND DEVELOPMENT PRIORITIES FOR 2026/27

This document outlines research and development priorities for 2026/27 identified jointly by Australasian Pork Limited and the Australasian Pork Research Institute Ltd.

1. Environment and Emissions

Expected outcome:

1) Delivering practical and meaningful outcomes that improve overall industry sustainability including emissions reduction and odour, and progressing nutrient and water management from effluent.
2) Changing the paradigm in environmental/effluent research from a cost of production/compliance issue to an opportunity for industry growth and improved productivity.

Key Research Areas:

- Water and nutrient management from farm and processing effluent streams.
- Objective and validated assessments of odour.
- Further emission reduction opportunities through all parts of the value chain.
- Low-cost gas capture and energy retention methodologies.
- By-product opportunities (e.g., manure, biogas, composting, renewable gas and fuels).

2. Feeding and Nutrition

Expected outcome:

Nutritional strategies and interventions that reduce herd feed conversion efficiency and contain feeds costs in the face of increasing competition for traditional raw materials.

Key Research Areas:

- Optimising nutrition of the breeding herd to improve piglet viability, lactation outcomes and sow longevity.
- Further development of rapid methods for analysis of ingredient composition of feed quality.
- Novel nutritional strategies and interventions that enhance carcase composition and/or feed conversion efficiency.
- Revision of nutrient requirements for all production stages.
- Increased understanding of Australian and international trends and practices that may impact the availability and cost of feedstocks.

3. Human Capacity and Society

Expected outcome: Building and retaining a resilient, diverse and skilled rural and regional workforce.

- Emerging, or utilising current, technologies and strategies to address labour challenges.
- Delivering meaningful, unilateral, and objective information about the Australian pork industry to external stakeholders and government.

- Further demonstrating and articulating the narrative of the Australian pork industry's credentials to food and protein supply (especially amongst Gen Z), upholding animal welfare principles, and supporting the communities in which it operates.

4. Data and Information

Expected outcome:

Exploiting the benefits of artificial intelligence for more efficient and profitable pig production, processing, and data and information analyses.

Key Research Areas:

- Automatic capture and use of data and information for more efficient and cost-effective housing, effluent, labour and pig management and utilisation.
- Use of AI technologies for welfare assessment at critical production points including farrowing, lairage, slaughter, processing, boning.

5. Pig Genetics

Expected outcome:

Enhancing the rate of genetic improvement in the Australian pork industry while maintaining current or better health status.

Key research areas:

- Evaluate, through a comprehensive benefit:cost production analysis, the impacts of increasing litter size through the industry supply chain.
- Methods, programs and alternatives to escalate rates and (or) exploit potential heterotic effects for genetic gain in key selected traits of industry importance.
- Increased understanding of genotype x environment interactions.

6. Pig Care and Wellbeing

Expected outcomes:

Providing novel tools or approaches to support continuous improvement and assessment of pig care and wellbeing and demonstrate the positive welfare credentials of Australian pork.

Key Research Areas:

- Evidence-based enrichment options, including low-cost, non-straw and effluent-friendly substrates, for use at all phases of production to optimise welfare.
- Objective assessment of pig care and wellbeing including the generation of a suite of suitable biomarkers indicating positive welfare attributes at end of life.
- Objective assessments of pain.
- Feed additives/nutritional strategies for positive welfare attributes.

7. Pig Health and Antimicrobial Stewardship

Expected outcomes:

Delivering novel technologies and approaches to mitigate risks and production impacts of infectious diseases, enhance emergency animal disease (EAD) preparedness, and further reduce antibiotic use.

Key Research Areas:

- Limiting the use of in feed antibiotics and enhancing the effectiveness and efficacy of water medication (in accord with the Australian Strategic and Technical Advisory Group on Antimicrobial Resistance (ASTAG)).
- New vaccines/new vaccine technologies to reduce reliance on antibiotics in production systems to tackle key diseases.
- Managing and preventing farm-to-farm incursions of current Australian pig diseases especially disease transmitted by aerosol.
- New technologies to identify sick pigs before presence of clinical signs.
- Regional eradication of significant diseases.
- Low cost and rapid methods (eg. pen-side, point-of-care) for pathogen detection.

8. Pig Processing and Meat Quality

Expected outcome:

Ensuring a sustainable processing sector and increasing the share of domestic fresh meat consumption and export market value.

Key Research Areas:

- AI-driven quality control and foreign object contamination reduction.
- Improve yield, reduce waste, and protect brand and compliance outcomes.
- Value-adding pork products, e.g., skin, bone, blood, into a complement of commercially available nutraceutical, pharmaceutical and (or) high-protein powder products, for pet or human use.
- Reducing processing energy and water costs.
- Sustainable and viable packaging options having excellent shelf life.
- Strategies to improve the eating quality of pork (e.g. improve tenderness and juiciness, optimise meat smell before/after cooking).
- Research that better links on-farm factors to processing and final product quality.

9. Retail

Expected outcome:

Achieving a greater share of meat consumption.

Key Research Areas:

- An understanding of the potential impacts of weight loss medications on pork demand and consumption patterns.
- Further promoting the nutritional value of pork.
- Create more and higher value-added products using fresh Australian pork, including development of new or improved products.