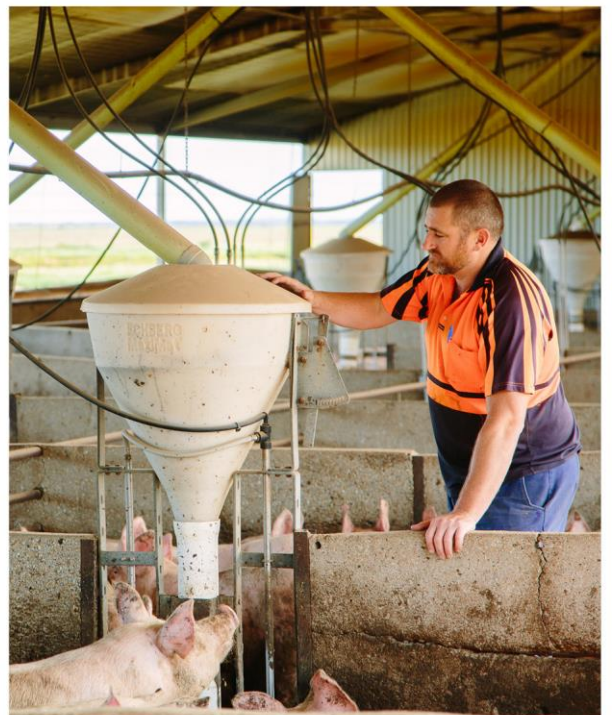


Australian Pork Limited

AUSTRALIAN
Pork™

REQUEST FOR PROPOSAL
LIFECYCLE ASSESSMENT FOR THE PORK INDUSTRY

June 2021



Request for Proposals

Project objective – provide an up to date baseline for Australian pork for carbon, water use, fuel use, land use, feed sources, renewable energy use, nitrogen, potassium and phosphorus footprints through an attributional lifecycle assessment (LCA).

Australian Pork Limited

Australian Pork Limited (APL) is the national representative body for Australian pig producers. APL is a producer-owned not-for-profit company combining marketing, export development, research, innovation and strategic policy development to assist in securing a profitable and sustainable future for the Australian pork industry. It is one of 15 rural research and development corporations (RDCs) providing research to Australian agriculture.

Funded by pig farmers, APL is paid to do what farmers can't do for themselves. This includes:

- a. Building demand for pork meat products
- b. R&D to reduce costs, improve product quality and value chain efficiency
- c. Interaction with government on farmers' behalf

Background

APL have recently undertaken a new Strategic Plan, for 2020-2025 ([see link](#)). Strategic Theme 4 in the 2020-2025 APL Strategic Plan calls for Leading Community Social License through “Blazing a trail for Australian agriculture to be sustainably celebrated and making our Australian investors proud of what they do.”

The strategic plan also sets out two ambitious goals for the industry – to become carbon positive and zero waste by 2025. This is reflected through the development of a Pork Sustainability Framework which seeks to measure and demonstrate improvement on an industry scale across a wide variety of indicators including carbon, water use, nitrogen/phosphorus,

While individual pork producers have already made great commitments and achievements in these areas an accurate, up to date understanding of the industry position is needed to set the baseline for these measures on behalf of the whole industry and to validate previous estimates.

Previous LCA work

As an intensive industry utilising monogastric animals, pork production benefits from a small land footprint in comparison to extensive production. [A recent trends analysis](#) across previous LCA work, including projecting the findings out to 2020 showed that the industry has come a long way in the last 40 years in reducing its environmental impacts. This reduction has been due to several factors including improved productivity (better feed conversion efficiency), a percentage of industry changing from conventional shedding to deep litter group housing, changes in manure management. Furthermore, reduced tillage, higher grain yields and a lower proportion of irrigation water used for grain production improved the efficiency of grain production systems, resulting in lower impacts per kilogram of feed grain produced.

The most recent LCA conducted on behalf of the industry utilised 2010 data. The study was done across six case study supply chains and the national herd, which placed the national herd at 3.6kg CO₂-e/kg LW, with the biggest determinant of emissions being the manure management system in place. Two peer reviewed papers were generated as a result of this work – available [here](#) and [here](#).

Other work has been done in the space stretching back over several years, another good reference being [a study](#) in 2008 which evaluated methods for quantifying greenhouse gas emissions from Australian piggeries. [PigGas](#), and its associated case studies also provided estimates of emissions across 55 piggery operations, however this was based on the 2010 National Inventory and its associated methods which is outdated so should be used with caution.

Current project

APL is currently seeking proposals to complete a full attributional life cycle assessment that represents the diversity of current farming methods and practices throughout Australia. The LCA must cover a minimum of 20% of production, all types of farming (conventional, deep litter, free range), all sizes, manure management systems and feed types. APL will assist with the identification of farms willing to participate to cover this scope.

Additional information around specific measures of nitrogen, potassium and phosphorus leeching per kilo of pork is also required. Fuel use is to include both diesel and gas use.

Feed use and sources are to be included as a distinct section of the report, outlining the common diets used in each stage of production and the amounts of which are sourced locally. Any additional insights on food/manufacturing waste incorporation (eg milk products, cooking oils, crop residues) should also be included if available.

The focus of the LCA should be cradle-to-grave, although preference is for some data to be tracked through from cradle-to-consumption if possible. The outputs from this process will be used to benchmark industry progress on goals and the actions required will largely need to occur behind the farm gate so a distinction between pre-farm inputs (eg grain), farm and production, processing and post-processing is desirable. Greenhouse gas emissions should be reported as carbon equivalents per kilo of hot standard carcass weight (HSCW) and kilo of pork (consumer).

The LCA must be done to current Australian standards and best practices and allow comparison between other similar industries. Beyond the individual farms assessed, the national industry impacts should be calculated based on the weighted averages for the farms assessed (rather than using published national production figures). Additional insights into Australian pork's ranking against other Australian protein sources (particularly for carbon, water and fuel) and international/imported pork would be considered favourably as an add on

If the proponent has undertaken LCA to this standard at any Australian piggeries in the last two years, APL is open to purchasing the data/compensating the organisation to expand the insights that can be gained from the industry LCA.

Research Purpose

Project objective – provide an up to date baseline for Australian pork for carbon, water use, fuel use, land use, feed sources, renewable energy use, nitrogen and phosphorus footprints through an attributional lifecycle assessment (LCA).

Key research objectives

Objectives and Outputs

1. Completion of an attributional LCA for the pork industry covering the above mentioned areas
2. Provide insights into the range of data for each area, with particular focus on carbon, water, feed and renewable energy
3. Provide some key options for potential communication, extension and roll out, including willingness to work with APL staff to develop extension materials including infographics, summaries and webinars/presentations.
4. At least one peer reviewed open access journal publication of LCA outcomes

Methodology

The consultant is to recommend the best methodology to achieve desired outcomes with the following considerations:

1. Must be to current Australian standard methodologies that allows comparison between similar projects in other industries.

Evaluation criteria

- Scientific quality and research relevance
 - Scientific foundation of the project proposal and quality of the research plan.
- Project proposal feasibility
 - Realism and feasibility of the research (with respect to the planned time, objectives, intended results, risks, proposed costs and resources available).
- Applicant and research environment quality
 - Scientific competence and research contributions of the applicant, research institute and/or team members in the proposed area (based on previous accomplishments and international relationships).
 - Proven ability to generate adoptable strategies for industries on ambitious targets
 - Applicant familiarity with the pork industry
- Adoption and additional analysis options
 - Cost breakdown for standard LCA and requested additional analysis
 - Ability to offer additional analysis of data and insights of relevance for the industry.

Timeline

Date	Activity
23 th June 2021	Applications open
7 th July 2021	Applications close 5pm
21 th July 2021	Notification of proposal review outcome
23 rd July 2021	Issue of Provider Agreement for successful applications and commencement of project
30 th October 2021	Progress Report
30 th January 2022	Progress Report
31 st March 2022	Final report
31 st October 2022	Article submitted to journal (note max of \$5K will be allocated to this milestone)

Submissions

How to make a submission:

Register or log in via PigConnect - <https://pigconnect.australianpork.com.au/>

- Submit and manage Project Applications
- View and manage your in-progress Projects
- Review Project Applications referred to you

Submissions close 5pm Wednesday 7th July 2021

Contact

If you are interested in submitting an application, please contact

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