

Request for proposal

Environmental Carbon Program – Low Capital Cost Greenhouse Gas Mitigation Options



October 2023 - Australian Pork Limited



Request for proposals

Project objective – to provide producers with tested and verified options to reduce their greenhouse gas emissions that are not cost prohibitive or practically challenging to adopt

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

As part of our 2020-2025 Strategic Plan and through the Pork Sustainability Framework, APL has committed to working towards a low carbon future for the industry. To further this goal we developed a low greenhouse gas pork roadmap to identify actions that industry can take now and future research needs in order to reduce emissions on farm. Of the research needs identified, the APL Environmental Technical Panel has prioritised investigating low CAPEX options for reducing on-farm emissions.

On a conventional, indoor pig farm, the greatest source of emissions on farm is effluent and manure management. In particular, an effluent pond can contribute up to 60% of a farm's emissions. While there are options to reduce these emissions they are either in development, not practical to incorporate on farm or are too expensive to be achievable by the majority of the industry. The current 'gold standard' for dealing with these emissions is anaerobic digestion which is typically applied as a covered lagoon model. While this is highly effective in reducing emissions, and anecdotally odour, it is highly technical and highly capital intensive with most projects going over \$1million per pond. When this has to be replaced in 8-10 years but payback times for average farms are around 6-7 years, it is not an ideal solution.

While there are current and developing methods to reduce emissions from manure, many of which have shown promise, often there is not much detail in effective development strategies for these on farm. While they may work on lab scale, it is often hard to demonstrate how things may be practically applied on farm without substantial investment. In a time of high interest rates, rising material costs and likely hard growing seasons in the next few years, there is a need to identify, verify and provide alternative options to industry in order to keep improving environmental outcomes. Specifically options that provide co-benefits such as reduced odour, increase fertiliser value or reduced regulatory burdens would be looked upon favourably by industry.

Current project

APL is seeking proposals for a project to investigate and present plausible low capital options for reducing emissions in a piggery. This does not have to be limited to manure management in conventional systems but it should be included.

The project is envisaged to include:

1. Identification of currently available commercial options (or those likely to be shortly available) to reduce emissions. These should include global options, but consideration needs to be given to any difficulties with importing substances/technologies or their use in Australia
2. Lab scale/small pilot testing of the top candidates to determine their effectiveness
3. Optional – greenhouse scale trials to assess potential environmental impacts of any treated effluent on soil health etc
4. Field trials at farm scale of the most promising candidates including any needed deployment technologies.
5. Evaluation of success of options for environmental outcomes AND costs of implementation for a producer at different scales and types of production eg 100 sow, 500 sow, 1000+ sow

Any options that fail to perform as needed on either environmental claims or costs should be highlighted as well as successful demonstrations. Those with co-benefits, particularly around odour reduction should also be noted in final evaluations.

Stop/Go milestones should be included at each stage in the event that technologies do not work and no suitable candidates are available for progression.

Involvement of a student in the project will be considered favourably.

Budget for 23/24 is limited to \$55K but future years are not restricted (within reason).

Extension

Preference will be given to proposals that present meaningful extension outputs which could include (but is not limited to):

- Demonstration sites (biosecure) or documented (eg video) explorations of options
- peer reviewed journal articles,
- management guides,
- factsheets,
- infographics.

At a minimum the successful applicant will be requested to present the results in a webinar for industry but proposals with other extension opportunities will be highly regarded, especially those with strong links to on ground service providers or other place-based extension networks.

Research Purpose

Project objective

- Provide evidence to give producers confidence to adopt technologies to reduce emissions
- Provide a producer resource for alternative ways to reduce emissions from effluent ponds
- Extension outputs for that provide clear succinct direction for producers

Timeline

Date	Activity
1 November 2023	Applications open
8 December 2023	Applications close 5pm
2 February 2024	Notification of proposal review outcome
16 February 2024	Issue of Provider Agreement for successful applications and commencement of project**

***Note:** Applications with long timeframes should include a minimum of 1 progress report every six months. Longer timeframes for this project may be considered, please contact to discuss.

****Note:** Projects over \$100k will be subject to Board approvals and processes which may take longer than advised.

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

Contact

If you are interested in submitting an application, please contact:
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