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## **Pork CRC Working To Drive Down Greenhouse Gas Emissions**

A Cooperative Research Centre for High Integrity Australian Pork study has found that greenhouse gas emissions (GHG) are 38 per cent lower in eco-shelters and 88pc of the variability in production systems with common effluent management systems is related to herd feed conversion (HFC).

Managed by Stephen Wiedemann while with FSA Consulting, Pork CRC Project 4C-117, 'Environmental impacts and resource use from Australian pork production assessed using life-cycle assessment (LCA)', is the first comprehensive study using LCA to benchmark greenhouse gas emissions from pork across the full production system.

The project included emissions from feed production, housing, manure management and meat processing and assessed 14 production units across different states and different production systems for at least 12 months.

Average emissions to the farmgate were 3.6 kg CO<sub>2</sub>-e / kg live weight pork and 6.36 +/- 1.03 kg CO<sub>2</sub>-e / kg wholesale (chilled bone-in) pork. The lowest modelled emissions were from a Queensland production farm using CAP-CHP systems (1.5 kg CO<sub>2</sub>-e /kg LW), which is similar to Queensland chicken meat production (1.3 kg CO<sub>2</sub>-e / kg LW).

Pork CRC CEO, Dr Roger Campbell, said it was interesting that deep litter housing resulted in a 38pc reduction in GHG emissions, compared to conventional housing and biogas capture with heat and power generation resulted in a 31-64pc reduction in GHG emissions from conventional housing. Outdoor production (in WA) also resulted in considerably reduced GHG emissions.

"Pork CRC's Bioenergy Support Program has helped drive quite a move towards on-farm biogas capture and power generation and I expect GHG emissions to decline substantially over time," he said.

"Also interesting was Stephen's finding that for similar manure management systems, 88pc of the variability in GHG could be predicted from differences in HFC, making it the most important production related indicator of GHG emissions," he said.

Across the farms, HFC ranged from 2.4 to 3.3 on a liveweight basis (3.2 to 4.3 on a carcass weight basis) and feed wastage ranged from 5.5pc to 7.5pc of total feed used.

These values represented 15.2 to 20.4 kg of feed lost per 100 kg of liveweight produced. Individual units within farms had HFC values approaching 3.8 on a liveweight basis.

"These results show that HFC also influences carbon emissions from pork production, so it's a double whammy when also considering HFC's profitability upside and clearly more needs to be done to reduce feed waste and improve HFC," Dr Campbell suggested.

"Based on these results and those from Pork CRC's benchmarking project, some producers have it under control and others have some way to go."

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# Media Release

Dr Rob Wilson, Leader of Pork CRC Program Four, ‘Carbon Conscious Nutrient Inputs and Outputs’, said such a comprehensive attributional investigation of pork production from major production regions and different production systems, utilising six case studies and analysis of the national herd, demonstrated the potential for Australia’s pork industry to markedly reduce GHG emissions and move towards Pork CRC’s aspirational goal of 1 kg CO<sub>2</sub>-e/kg LW,”

The project report (4C-117) is available under the Research/Program 4 tab on Pork CRC’s website at [www.porkcrc.com.au](http://www.porkcrc.com.au)

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