

PigGas Report 24 – 110 sow, farrow to finish, conventional piggery, Tas.

February 2014



Production details

This is a family owned conventional piggery, with breeding and growing pigs on one site in five naturally ventilated sheds. The pigs are sold at a range of pork and bacon weights from 67 kg to 98 kg live weight to local butchers and a supermarket. The site does not have electrical power. Site equipment is powered by diesel and petrol engines with LPG used for heating suckers and weaners.

Feed consumption

All cereal grains and feed ingredients for pig diets are purchased off-site and milled and mixed on-site. Total feed consumed at the piggery is 478 t/yr.

Sales/Tranfers

2,087 pigs/yr are sold with a total dressed weight of 124 t/yr.

Waste management systems

Manure is manually hosed or flushed from free draining and pull plug under-floor drains in the sheds. Effluent flows directly to a primary anaerobic pond and then to a secondary treatment pond.



The National PigGas Extension Project is funded by Ian Kruger Consulting, the Australian Government and Australian Pork Limited.

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Manure reuse systems

Effluent from the treatment ponds is regularly irrigated via a small travelling irrigator to improved pastures used for cutting silage and grazing cattle. Total property area is 60 hectares.

On-Farm Baseline Emissions

The current baseline emissions for this piggery total **636 tonnes CO₂-e/yr** with an emissions intensity of **5.14 kg CO₂-e/kg HSCW**.

On-Farm Emissions Reduction Scenario

This piggery is too small to economically capture and reuse pond methane. There are two options to reduce emissions on this site. The first is to reduce feed wastage from 10% to 5% for the dry sows, gilts, weaners, growers and finishers. This will save feed costs and reduce pond methane emissions. The second option is to install a 1.5 km power line from the main road to the piggery to replace 85% of the liquid fuels used and 100% of the LPG with electricity.

This scenario (see table below) reduced on-farm emissions **from 636 t/yr to 544 t/yr** and reduced kg CO₂-e/kg HSCW **from 5.14 to 4.40 (14% reduction)**. The majority of this saving is due to reducing feed wastage.

The piggery owners are currently planning to install electrical power at the site and are undertaking feeder adjustments to reduce feed wastage.

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Annual Greenhouse Gas Emissions Profile (calculated using PigGas)

Emissions	Current Emissions Baseline (kg CO ₂ -e/yr)	Reduction Scenario (kg CO ₂ -e/yr)
Pre-farm		
Grain	119,457	119,457
Milling & delivery	0	0
Pig freight	0	0
Straw & bedding	0	0
Total Pre-farm	119,457	119,457
On-farm		
<i>Fuels & energy</i>		
Purchased electricity	0	33,750
Fuel - stationary	45,627	6,369
Fuel - transport	0	0
<i>Enteric CH₄</i>	16,728	17,543
<i>Manure management</i>		
MMS CH ₄	542,727	456,016
MMS – direct N ₂ O	3,585	3,585
MMS – Atmos. deposition N ₂ O	8,839	8,839
<i>Waste applied to soil</i>		
Soil – direct N ₂ O	13,131	13,131
Soil – leaching & runoff N ₂ O	4,899	4,899
<i>Offsets</i>	0	0
Total On-farm	635,537	544,132
Post-farm		
Pig freight	1,442	1,442
Meat processing	49,426	49,426
Exported manure	0	0
Total Post-farm	50,867	50,867
Dressed weight sold - HSCW (kg/yr)	123,565	123,565
Carbon footprint	(kg CO₂-e / kg HSCW)	(kg CO₂-e / kg HSCW)
Pre-farm	0.97	0.97
On-farm	5.14	4.40
Post-farm	0.41	0.41
Total	6.52	5.78



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