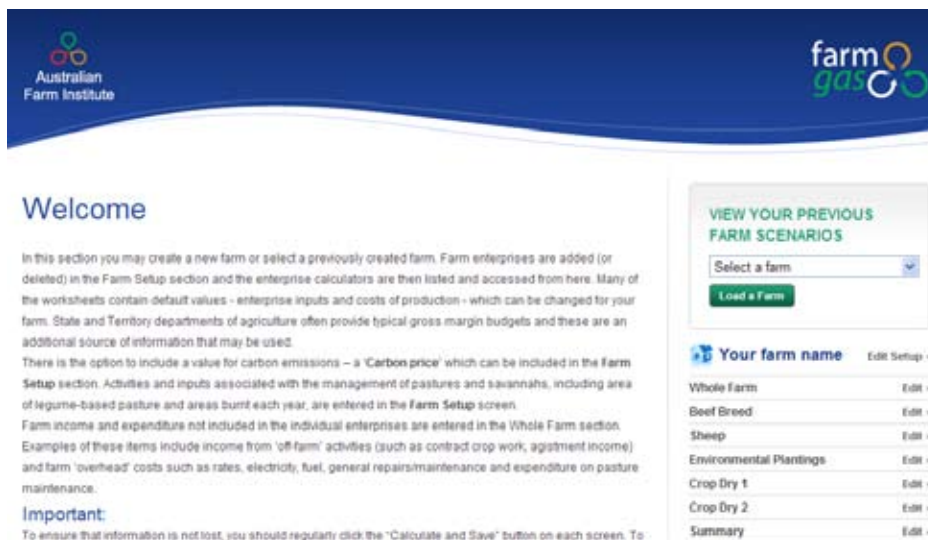


FarmGAS Calculator

Information you will need to complete the Calculator

August 2009



The screenshot shows the FarmGAS Calculator website interface. At the top, there is a blue header with the Australian Farm Institute logo on the left and the 'farm gas' logo on the right. Below the header, the page is divided into two main sections. On the left, there is a 'Welcome' section with a heading and several paragraphs of text. On the right, there is a 'VIEW YOUR PREVIOUS FARM SCENARIOS' section with a dropdown menu and a 'Load Farm' button. Below this, there is a 'Your farm name' section with a table listing various farm components and their corresponding 'Edit' links.

Welcome

In this section you may create a new farm or select a previously created farm. Farm enterprises are added (or deleted) in the Farm Setup section and the enterprise calculators are then listed and accessed from here. Many of the worksheets contain default values - enterprise inputs and costs of production - which can be changed for your farm. State and Territory departments of agriculture often provide typical gross margin budgets and these are an additional source of information that may be used.

There is the option to include a value for carbon emissions - a 'Carbon price' which can be included in the Farm Setup section. Activities and inputs associated with the management of pastures and savannahs, including area of legume-based pasture and areas burnt each year, are entered in the Farm Setup screen.

Farm income and expenditure not included in the individual enterprises are entered in the Whole Farm section. Examples of these items include income from 'off-farm' activities (such as contract crop work, agistment income) and farm 'overhead' costs such as rates, electricity, fuel, general repairs/maintenance and expenditure on pasture maintenance.

Important:
To ensure that information is not lost, you should regularly click the "Calculate and Save" button on each screen. To

VIEW YOUR PREVIOUS FARM SCENARIOS

Select a farm

Load Farm

Your farm name [Edit Setup](#)

| | |
|-------------------------|----------------------|
| Whole Farm | Edit |
| Beef Breed | Edit |
| Sheep | Edit |
| Environmental Plantings | Edit |
| Crop Dry 1 | Edit |
| Crop Dry 2 | Edit |
| Summary | Edit |

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Australian Farm Institute Limited

Suite 73, 61 Marlborough Street
Surry Hills NSW 2010
AUSTRALIA
ABN 29 107 483 661
T: 61 2 9690 1388
F: 61 2 9699 7270
E: info@farminstitute.org.au
W: www.farminstitute.org.au

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1. Introduction

Depending on which enterprises you have on your farm, you will need various pieces of information to complete the Calculator. This will vary from herd or flock details to sale price of wool to fertiliser application rates and percentage Nitrogen in the fertiliser applied. The information which relates to greenhouse gas emissions for your farm is **highlighted in red**. If you just want to get an idea of the greenhouse gas emission profile of your farm you will only need this information; the additional data relates to gross margin budgets.

In the livestock calculators, there is an option to investigate the cost and greenhouse gas emission implications of ‘treating’ stock with a hypothetical application which can reduce methane emissions, nitrous oxide emissions, or both. To complete this hypothetical scenario, a cost per head or total needs to be determined, and the estimated reduction in emissions entered. The calculator will then provide information on the ‘cost’ of emissions with and without this hypothetical application and the expenditure on mitigation.

1.1 Setting up your farm

Location of farm (State, and if in Western Australia, sub-region of South-West, Pilbara or Kimberley)

Enterprises included in the farm:

Beef – breeding or store operation

Sheep

Intensive livestock – feedlot or piggery

Dryland cropping – up to 4 crops

Irrigated cropping – up to 2 crops

Horticulture

Environmental plantings

Total farm area (hectares)

Pasture area – dry and irrigated

Area of pastures burnt each year

Area of savannah woodland burnt each year

Fertiliser applied to pastures:

Area fertilized (hectares)

Quantity applied (kilograms per hectare)

Percentage Nitrogen in fertiliser

Carbon price (dollars) – *this is a hypothetical price per tonne of Carbon Dioxide equivalents designed to give an indication of cost implications should farms be responsible for direct emissions*

1.2 Whole Farm

Costs:

Wages (permanent and casual)
Office administration costs
Rates
Insurance
Accounting, legal expenses
Repairs and maintenance
Water costs – general farm
Pasture maintenance costs
Electricity costs
Gas heating
Heating oil
Fuel (not specific to any one enterprise within the farm)
LPG
Lubricants/greases

Income:

Agistment
Contract farming
Contract harvesting
Other farm income

1.3 Horticulture

Crop type

Variety

Crop area

Yield in kilograms per hectare

Percentages of crop as grades (premium, grade 2, grade 3 etc)

Average price per case for each grade

Costs:

Disease control costs for fungicides and insecticides (per hectare or total cost)

Weed control costs (per hectare or total cost)

Fertiliser cost (per hectare or total cost)

Foliar spray costs

Testing costs for leaves and soil (per hectare or total cost)

Pruning and thinning costs

Pollination (hive hire) costs (per hectare or total cost)

Megalitres used in irrigation

Water charges

Pumping costs (electricity, fuel)

Fuel costs (specific to this enterprise)

Repairs and maintenance

Picking costs

Packing costs (own or contract) per case

Transport costs per case

Levies per case

Fertiliser use:

Quantity applied per hectare

Percentage Nitrogen in fertiliser

Percentage application of crop area

1.4 Beef breed

Area of enterprise

Number cows over 2 years of age

Number heifers

Number of steers over 1 year

Weaning percentage

Mortality rate across the whole herd

Number bulls

Number replacement bulls

Percentage calving by season (Spring, Summer, Autumn, Winter)

Sales and purchases of all cows, heifers, steers, calves, bulls and replacement bulls by season (Spring, Summer, Autumn, Winter)

Average sale and purchase price per head for each category

Costs:

Number treated with drench/vaccination and cost (per head or total)

Number calves marked and cost (per head or total)

Ear tags, number and cost

Tonnes hay, grain, silage and fodder crops fed per year and cost (per tonne or total)

Cartage to and from saleyards (per head or total)

Yard duties and levies (per head or total)

Tags for sale stock, number and cost

Commission as percentage of total sales

1.5 Beef store

Enterprise area

Type of cattle (steers or heifers)

Class of stock (under 12 months, or between 12 and 24 months)

Opening stock number

Purchase in price (dollars per head)

Sale price (dollars per head)

Mortality percentage

Sales and purchases by season (Spring, Summer, Autumn, Winter)

Costs:

Drench and vaccine costs, number treated and cost per head or total

Vet and health costs, number treated and cost per head or total

Calf marking costs

Ear tags

Supplementary feed for grain, hay, silage and fodder crops (tonnes fed per year, cost per tonne or total)

Cartage to and from saleyards

Yard duties and levies

Tags

Commission as percentage of total sales

1.6 Feedlot

Area of enterprise

Number in feedlot

Average starting weight (kilograms per head)

Target finish weight (kilograms per head)

Days in feedlot

Percentage mortality

Percentage culls

Cost of purchase (cents per kilogram liveweight or dollars per head)

Sale price (cents per kilogram liveweight or dollars per head)

Sale price per head of culled stock

Sales of manure in tonnes and sale price (dollars per tonne)

Costs:

Cartage to and from saleyards, number of head and cost (per head or total)

Commission or fees on purchases and sales

Transaction levy (per head or total)

Other selling costs

Feed costs (per head or total)

Drenches and vaccines, number treated and cost (per head or total)

Fuel costs (specific to this enterprise)

Electricity costs (specific to this enterprise)

Gas costs (specific to this enterprise)

Repairs and maintenance

Labour costs (for feedlot only)

Other feedlot expenses

1.7 Piggery

Enterprise area

Number and average weight of stock classes:

Lactating sows

Dry/gestating sows

Gilts

Boars

Suckers

Weaners

Growers

Finishers

Heavy finishers

For each of the classes of stock, the cost of feed in dollars per tonne

Percentage waste sent to manure management systems; which provides two options for each class of stock. Within this, the choice of manure management systems are:

Anaerobic lagoon

Liquid/Slurry systems

Solid storage and drylot

Spread on pastures and crops

Digester

Number of sows replaced after X years

Number of boars replaced after X years

Sow/gilt/boar percentage mortality

Post weaning mortality percentage

Number of litters per sow per year

Average litter size (weaned)

Number piglets kept as replacement gilts

Percentage of progeny sold as porkers

Percentage of progeny sold as baconers

Percentage of progeny sold as others

Percentage of waste used on farm (spread onto pastures)

Income:

Sale weight (liveweight) and sale price for each category:

- Porkers
- Baconers
- Cull sows
- All boars
- Other

Manure sales, tonnes sold and price per tonne

Costs:

Number of purchases and average price per head for:

- Sows
- Gilts
- Boars
- Others

Annual cost of feed supplies (per sow or total cost)

Labour costs (specific to this enterprise)

Vet and health costs (per sow or total cost)

AI costs

Recording costs

Requisites

Electricity shed costs

Repairs and maintenance costs

Cartage per head

Slaughter levy per head

Commission percentage of total sales

Other costs

1.8 Sheep

Enterprise area

Opening stock numbers:

Ewes

Maiden ewes

Other (dry) ewes

Lambs/hoggets

Rams

Wethers

Weaning percentage

Mortality percentage across the entire flock

Percentage lambing by season (Spring, Summer, Autumn, Winter)

Sales and purchases by season (Spring, Summer, Autumn, Winter) for:

Breeding ewes

Maiden ewes

Other ewes

Lambs/hoggets

Rams

Wethers

Average sale or purchase price for each category (dollars per head)

Wool production for each category (kilograms per head)

Average sale price for wool for each category (cents per kilogram)

Costs:

Cartage costs to and from the saleyards (per head or total)

Commission as percentage of total sales

Shearing costs per head specific to each class

Number of shearings per year for each class

Crutching costs:

 Number of each class treated

 Number of times per year repeated

 Cost (per head or total)

Shed costs (shedhands, woolclassers)

Wool tax (percentage of wool income)

Commission (percentage of wool sales)

Wool selling costs (warehouse, testing etc)

Cartage

Wool packs, branding fluid etc

Health costs including drenching, dipping, jetting, vaccine, lamb marking, scanning:

 Number of each class treated

 Number of times per year repeated

 Cost (per head or total)

Ear tags

Number of tonnes and cost per tonne for hay, silage, grain and fodder crops.

1.9 Environmental plantings:

Rainfall region (options provided according to State)

Most indicative soil type (options provided according to rainfall region)

Area of trees planted

Year trees planted

1.10 Crops (dryland)

Crop type

Crop area

Yield (tonnes per hectare)

Price received per tonne

Spraying, ploughing and mowing costs (per hectare or total)

Seed cost (per hectare or total)

Seed treatment (per tonne or total)

Cost of fertiliser at sowing

Cost of fertiliser in-crop

Cost of herbicide, insecticide and fungicide (per hectare or total)

Harvesting cost own plant or contract (per hectare, per tonne or total)

Cartage

Seed (grading etc)

Levies (per tonne or total)

Crop insurance (per hectare or total)

Stubble management, options include burn, graze or bale. If burnt, percentage of crop area burnt is required.

Fertiliser at sowing and in-crop:

Quantity (kilograms per hectare)

Percentage Nitrogen in fertiliser

Percentage application of crop area

1.11 Crops (irrigated)

Crop type

Crop area

Yield (tonnes per hectare)

Price received per tonne

Spraying, ploughing and mowing costs (per hectare or total)

Seed cost (per hectare or total)

Seed treatment (per tonne or total)

Cost of fertiliser at sowing

Cost of fertiliser in-crop

Cost of herbicide, insecticide and fungicide (per hectare or total)

Harvesting cost own plant or contract (per hectare, per tonne or total)

Cartage

Megalitres water used

Water application costs (per megalitre, per hectare or total)

Water charges (per megalitre, per hectare or total)

Pumping costs (electricity, fuel)

Seed (grading etc)

Levies (per tonne or total)

Crop insurance (per hectare or total)

Stubble management, options include burn, graze or bale. If burnt, percentage of crop area burnt is required.

Fertiliser at sowing and in-crop:

Quantity (kilograms per hectare)

Percentage Nitrogen in fertiliser

Percentage application of crop area