

Fact sheet

FEEDLOTS

Accounting for greenhouse gases (GHGs) in a feedlot

What is carbon accounting?

Carbon accounting is the process used to determine the net inflow (sequestration) or out flow of GHG emissions of an operation, on an annual basis. As part of this process, emissions are defined into three scopes (Figure 1).

Scope one:	Direct GHG emissions from sources owned or controlled by the company.
Scope two:	GHG emissions from the generation of purchased electricity consumed by the company.

Scope three:

Emissions that arise as a consequence of the activities of the company but occur from sources not owned or controlled by the company.

- Upstream emissions: from pre-feedlot sources such as the production of purchased feed, manufacture of chemicals, feeder cattle emissions and the burning of fossil fuels including the extraction, production and transport of fuel and electricity.
- Downstream emissions: are post-feedlot emissions associated with the processing of cattle, including emissions from transportation, meat processing and distribution.

Tip

Emissions can also be separated into direct and indirect emissions:

- Direct emissions are from sources that are owned or controlled by the company.
- Indirect emissions are a consequence of the activities of the company but occur at sources owned or controlled by another company.

What is a carbon footprint?

A carbon footprint examines the combined impact of all emissions produced from an organisation or for a product (i.e. an organisation carbon footprint and a product carbon footprint).

A carbon footprint includes scope one, scope two and scope three emissions and is most commonly reported for a product and expressed relative to output, such as kilograms of ${\rm CO_2}$ -e per kilogram of live weight sold.

Three things you will need to create a carbon account

- 1. Livestock numbers for each class of cattle
- 2. Key activity data for each cattle market type
- 3. Information on the feed ration.

Figure 1: Examples of scope one, two and three emissions for a feedlot

Upstream (grazing cattle)

Scope 3 emissions

Feeder cattle livestock emissions

Emissions from the production of feed:

- grain
- hay
- silage
- fodder
- · supplements.

Emissions from fertiliser and other chemicals

Emissions from the extraction of fossil fuels for electricity and fuel

Operational boundary (feedlot)

Scope 1 emissions

Feedlot livestock emissions:

- enteric methane
- manure emissions including nitrous oxide and methane.

Feedlot services including diesel, petrol and electricity

Feedmilling

Scope 2 emissions

Grid-supplied electricity emissions

Downstream (retail)

Scope 3 emissions

Transport emissions

Meat processing and distribution

Retail

More information

Read the Moving towards carbon neutrality – Opportunities for the feedlot industry technical manual.