Department of Primary Industries and Regional Development



Protect Grow Innovate

Chicken meat and greenhouse gas emissions

The gross value of production for WA chicken meat was estimated at \$196 million in 2020.

Despite expected industry growth, emissions are projected to remain stable.

2020 chicken meat industry snapshot

Total emissions from the WA chicken meat industry were estimated at 0.32 Mt CO₂e in 2020.

Approximately 76% of emissions are from purchased feed, mostly imported soybean meal and Western Australian sourced grains. Other emissions sources include manure, agricultural soils, and fuel use.



Estimated emissions from the WA chicken meat industry by source in 2020.

Mitigation challenges

Free-range chicken meat trend may increase emissions due to lower feed conversion ratios and nitrous oxide emissions from deposited manure. Formulating new diets to replace imported soybean is a technical challenge.

Chicken meat industry emission sources

Emissions are classified as Scope 1,2 and 3. This separation aids in identifying the source of emissions.

Scope 1: All emissions on-farm from chicken meat.

Scope 2: Emissions from electricity.

Scope 3: Emissions associated with producing inputs, both pre-farm and post-farm.



2020 estimated emissions from the chicken meat industry. *Only pre-farm scope 3 emissions are included here.

Chicken meat emission research priorities

Emissions reductions research from the WA chicken meat industry include:

- Verifying N₂O emissions from barn and free range chickens
- Identifying options to reduce N₂O emissions
- Developing a zero manure waste strategy
- Developing new processes for capturing methane
- Encouraging producers to reduce electricity emissions through energy efficiencies
- Exploring diet formulations to replace imported soybean meal with local feed sources.

Ways to reduce emissions in the chicken meat industry:

- Breed and manage chickens
 Electrify machinery as WA's for more efficient growth
- Replace imported feed sources with local grains
- Diet optimisation & use low emission feed ingredients
- Improve manure management
- Utilise manure to produce renewable energy on-farm

- electricity grid decarbonises.
- Increase carbon sequestration (for example by planting trees and retaining native vegetation)
- Use manure as an emissions offset by replacing synthetic fertiliser in crop production.

Developing knowledge of carbon accounting supports achieving reductions.

More information

Subscribe to the Climate Resilience mailing list for updates on climate news, emissions and events.



Future proofing regional WA

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