PLANET

GREENHOUSE GAS EMISSIONS

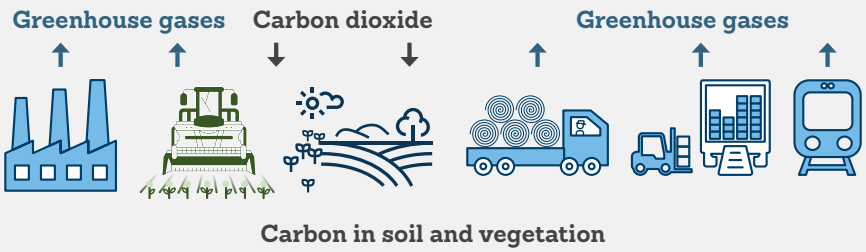
| acting on climate change

Source: Visser, Carbon Footprint of Australian Irrigated Cotton 2019. CRDC research.

Cotton production releases greenhouse gas emissions.

Growing, ginning and transporting cotton to port is estimated to account for about 0.2 per cent of Australia's greenhouse gas emissions (GHGs).

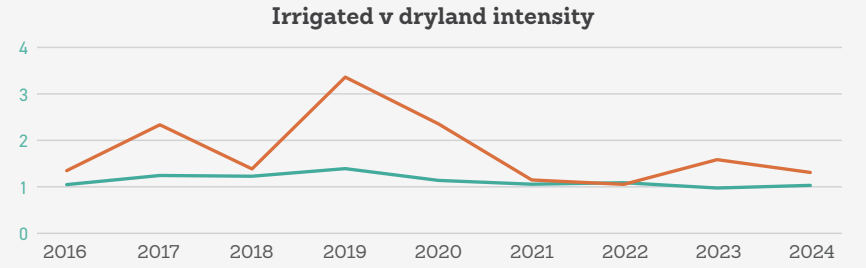
Nitrogen (N) is essential for plant growth, but N fertiliser also accounts for about 60 per cent of on-farm cotton GHGs. Reducing the amount of N used to grow a kg of cotton is therefore essential to reduce GHGs.



Cotton farms also store carbon.

Vegetation on cotton farms naturally removes (sequesters) carbon dioxide from the atmosphere. CO_2 can be stored as carbon in vegetation, and in soil.

The cotton industry is working with others to accurately calculate carbon sequestration on cotton farms, and the farm practices that have the biggest impact on sequestration.



*Source: Ekonomou A., Eckard R.J. (2024), University of Melbourne C-GAF based on the Australian National Greenhouse Gas Inventory methodology. *Change in N survey question from previous years.*

The cotton industry aims to reduce greenhouse emissions and increase carbon storage.

The Australian cotton industry is developing a strategy to reduce its net emissions from dryland – grown only with rain – and irrigated cotton. Dryland cotton uses less N per hectare than irrigated cotton, but yields typically a quarter of irrigated cotton. This results in dryland cotton having a larger carbon intensity than cotton irrigated with sustainably withdrawn water, and is especially evident in dry, low-yielding years like 2019 and 2020.

OUR AMBITION

To contribute to the Paris Agreement's aim of a climate neutral world. This would mean reducing the emissions released in cotton production while sustaining carbon in the soil and vegetation on cotton farms.

SDG ALIGNMENT

SDG 13: Take urgent action to combat climate change and its impacts.

PATHWAY

1. Set GHG reduction target.
2. Reduce nitrogen fertiliser emissions.
3. Reduce fossil fuel emissions.
4. Increase carbon sequestration and storage on farms.

KEY FACTS

0.2% of Australia's greenhouse gas emissions come from growing, ginning and transporting cotton to port

Relatively flat trend in emissions per bale from 2016 to 2024