

# CARBON NEUTRALITY BY 2030?

What you can do today?



## Greenhouse Gas Emission

In Australia, agriculture contributes approximately 13% of our greenhouse gas (GHG) emissions, the third biggest sector followed by Stationary energy and Transport (DISER 2020). About a half of the agricultural sector's emissions are methane and produced by ruminant digestion of cows and other livestock.

## Why Carbon Neutrality

Carbon neutrality in agriculture can be win-win for farmers as there are a number of financial opportunities as well as environmental benefits while improving productivity and increasing resilience to a changing climate.

To achieve carbon neutrality, the net carbon emissions from a farm can be reduced to be equal with the net carbon stored through sequestrations, plus the net number of carbon offsets held by a business.

DISER 2020  
Australia's emissions projections 2020  
Department of Industry, Science and Resources  
[www.industry.gov.au/data-and-publications/australias-emissions-projections-2020](http://www.industry.gov.au/data-and-publications/australias-emissions-projections-2020)

## EIGHT STEPS TOWARD CARBON NEUTRALITY

1

### Identify your main sources of GHG emissions

If your farm has a large number of cattle or sheep, it is likely that methane is your largest source of GHG emissions.

If you are a horticultural producer, your main emissions are likely to be mainly nitrous oxides.

Farms that regularly cultivate soils may also lose significant amounts of carbon from soils, while farms that have high energy usage (e.g., due to irrigation pumps or dairy infrastructure) may have substantial amounts of carbon dioxide generated from use of fossil fuels.

It is important to identify what your major sources of emissions are before making any decisions regarding carbon farming interventions.

2

## **Plan mitigation interventions for your main sources of GHG emissions**

For livestock, consider adopting a feed supplement to mitigate enteric methane (e.g., seaweed, Bovaer or dietary oils).

For cropping enterprises, consider the 4Rs of nitrogen fertiliser application: Right place, Right rate, Right time, Right type.

For farms that use a lot of power or fuel, consider upgrading infrastructure or using power off-peak (e.g., after 5pm), using machinery less often and minimising use of diesel.

For dairies and piggeries, consider manure management to capture and avoid production of methane.

Many greenhouse gas emissions mitigation interventions are outlined in this short YouTube video:

<https://www.youtube.com/watch?v=jnNNfFbY7Nw>

3

## **Consider whether you want to be paid for your direct GHG emission mitigation**

Some payment schemes exist for some carbon farming interventions (e.g., Herd Management), but not all.

Payment schemes usually require official certification via an accredited agent and involve transaction costs. Trading of some types of carbon (e.g., soil carbon) can carry inherent risk, because soil carbon is quickly lost during drought. This may expose you to increased financial risk.

4

## **Consider carbon removal versus greenhouse gas emissions mitigation**

Soils and trees actively remove CO<sub>2</sub> from the atmosphere, whereas mitigation measures reduce the rate of GHG emissions (e.g., livestock feed supplement reduces the rate of enteric methane production).

For degraded soils, improving soil carbon may be the most appropriate avenue to reduce farm emissions.

Whether removal or mitigation is likely to be more effective for your farm depends on point 1 above.

5

## **Carbon offsetting should be considered a last resort**

You can make your business carbon neutral by purchasing carbon credits or “ACCUs.”

The total credits purchased should match your net GHG emissions. This should be considered a last resort because purchasing external carbon credits does nothing to prevent global warming. If everyone did this, carbon prices would rise sharply, GHG emissions would continue, and global temperatures would continue to rise. Even though your business would be carbon neutral (net-zero) on paper, in practice, it would still be producing GHG emissions.

6

## **Consider positives (co-benefits) and negatives (trade-offs) associated with your nominated interventions**

Improving soil carbon is conducive to improving soil health, improved water holding capacity, improved fertility, and improved crop/pasture production. Planting trees can improve livestock production through shading or shelter e.g., by reducing lamb mortality due to wind chill.

Improving soil organic matter and trees on farm may also improve biodiversity and natural capital of your farm. Small areas of trees planted on farm often lead to capital appreciation, so your business may be worth more with a small area of trees (up to 4 per cent of farm area) compared with a farm with no trees.



7

## Calculate your farm carbon footprint

Calculating your own carbon emissions helps provide insight as to your whole farm GHG emissions as well as the major sources of emissions.

CN30 Carbon Storage Partnership will run free carbon accounting workshops.

8

## Talk to people who are already involved in carbon farming

This is one of the best ways to avoid past mistakes, ascertain practical details and determine which is the best carbon farming option for you.

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**For more information about CN30 please visit Meat & Livestock Australia website**

<https://www.mla.com.au/research-and-development/Environment-sustainability/carbon-neutral-2030-rd/>

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