

Naracoorte MeatUp 2022

Red meat industry carbon neutral 2030 *overview*

Presented by **Margaret Jewell**

CN30 | Carbon Neutral
2030

Agenda

- Who, what, where, when, why, how?
- CN30 opportunities for red meat producers
- CN30 roadmap



Who, what, where, when, why, how?

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MLA's role

Working in collaboration with the Australian Government and the wider red meat industry, MLA invests in initiatives that contribute to **producer profitability, sustainability and global competitiveness.**

MLA's remit

- Research
- Development
- Adoption
- Marketing



Industry's focus and direction over the immediate future

Red Meat 2030

Our vision

Together, we will double the value of Australian red meat sales as the trusted source of the highest quality protein.



Industry's focus and direction over the immediate future



Our vision

Together, we will double the value of Australian red meat sales as the trusted source of the highest quality products.



CN30 | Carbon Neutral 2030

1. Target – for the Australian red meat industry to achieve net-zero greenhouse gas (GHG) emissions by 2030
2. Coordinated RD&A effort
3. Industry target – does not require all farms/businesses/properties to be carbon neutral

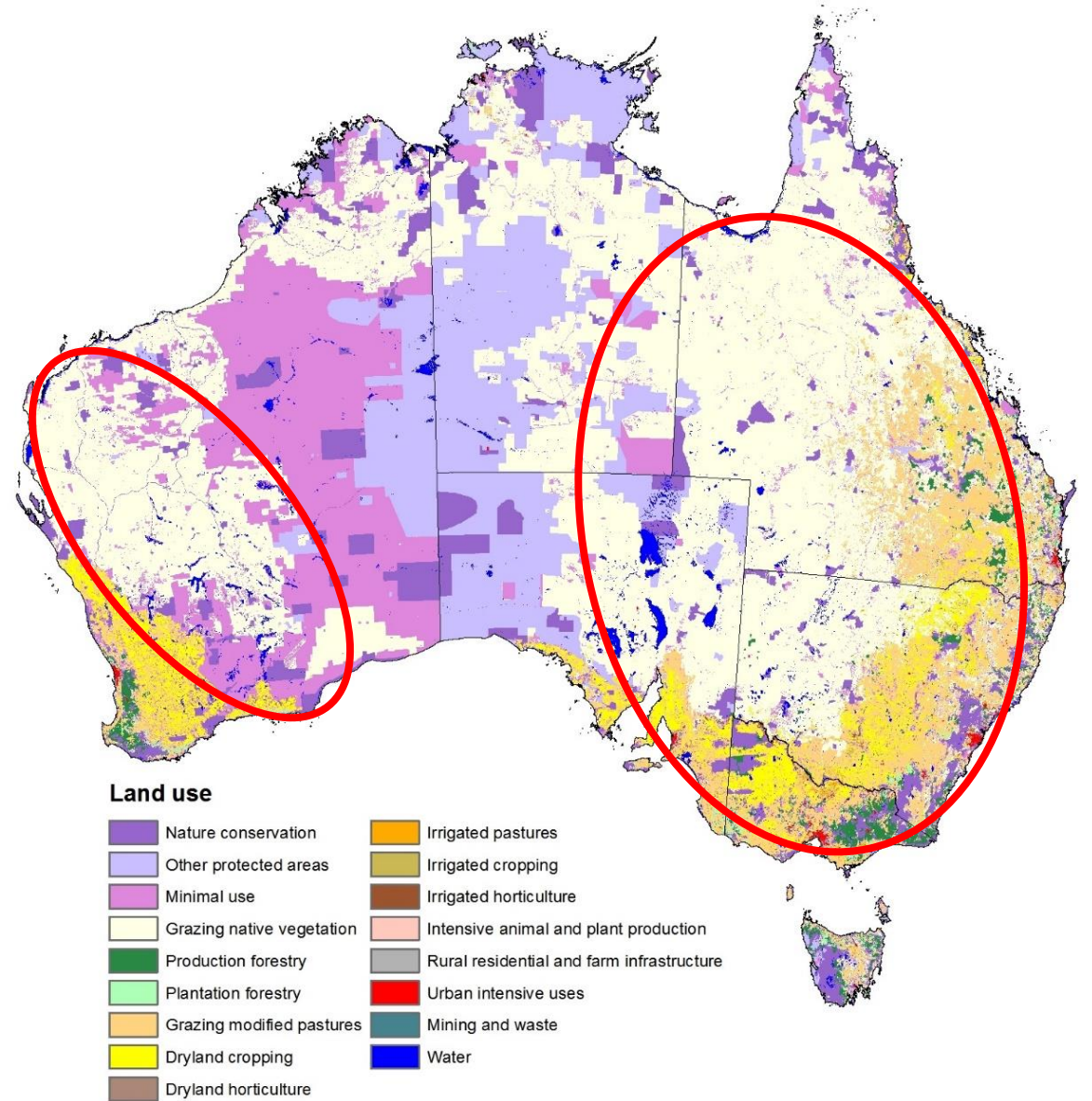


GHG emissions $-$ **emissions captured and/or offset** $=$ **0 CO_{2e} emissions p.a.**

GHG emissions are measured and reported by the National Greenhouse Gas Inventory accounts under Agricultural Emissions and Land Use Land Use Change categories

Where is red meat produced?

- Red meat production is a major land use in Australia – 355 mha (around 50% of land mass)
- We operate the land that offers a major carbon storage solution for Australia
- 26mill cattle, 66mill sheep, 4mill goats
- Most animals are managed in extensive production systems not economically suitable for other food production systems
- Because of geological, topographic and climatic factors, less than 8% of Australia's land is suitable for crop production.

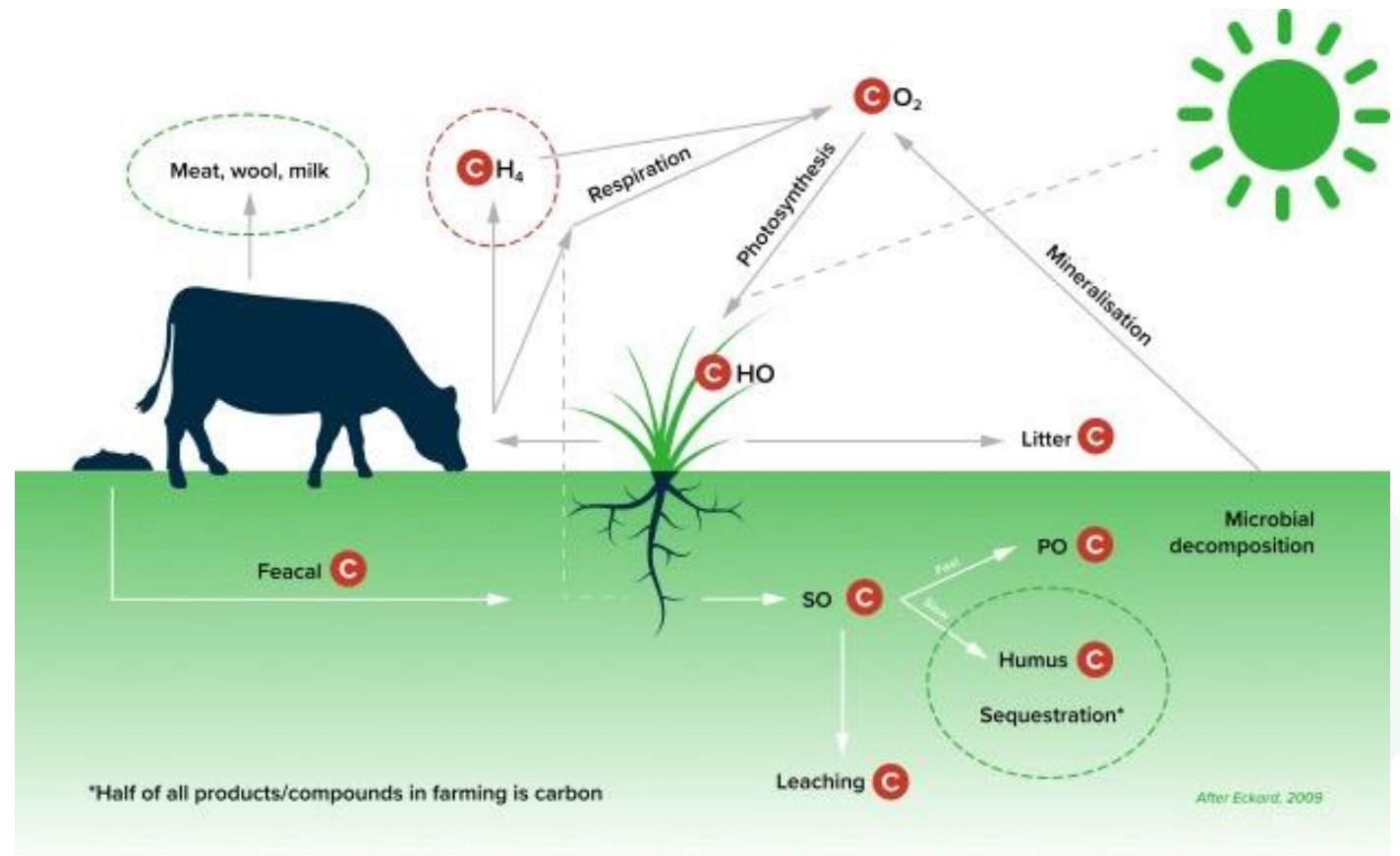


New ways of farming; carbon use efficiency

Common production efficiency metrics include NUE, WUE, FCE, EUE

Why not 'carbon use efficiency'?

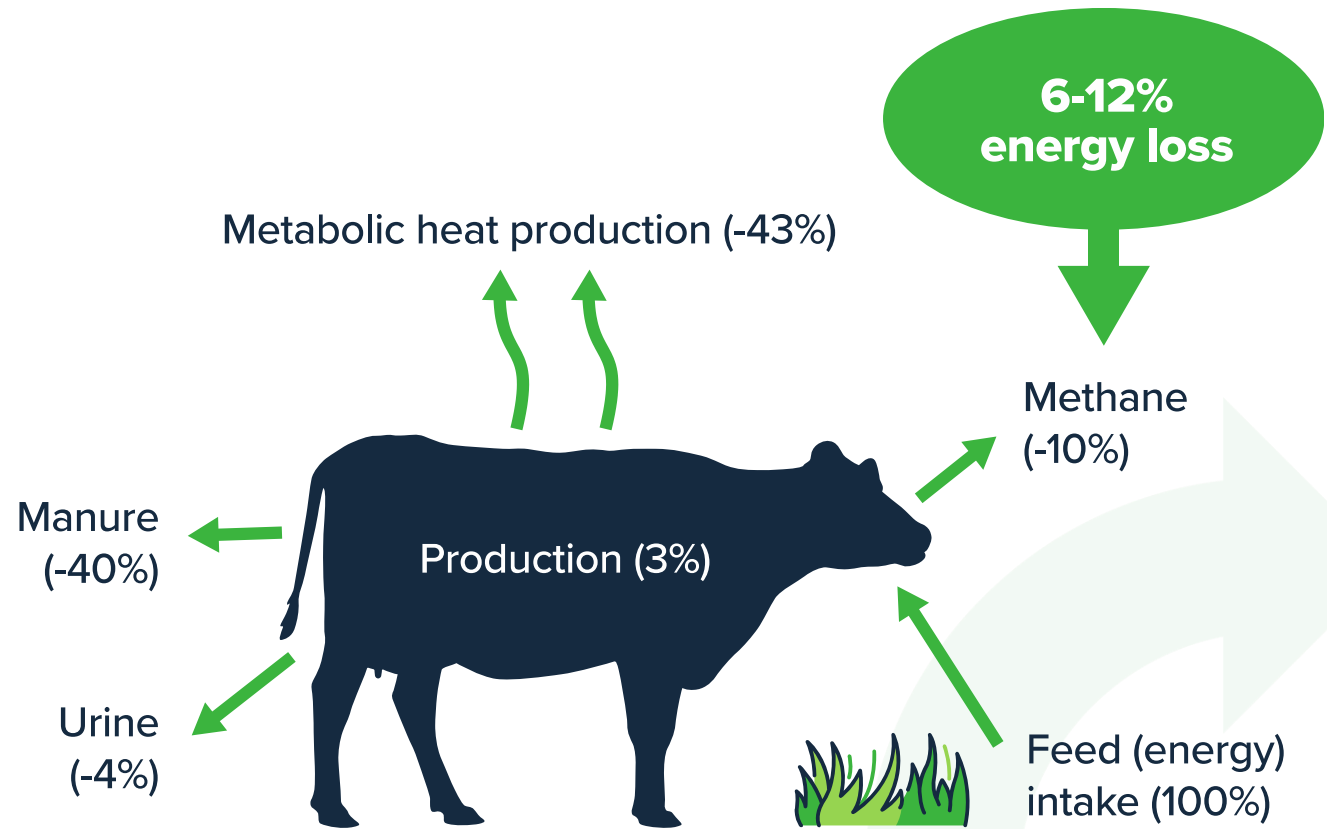
- Proportion of carbon acquired from the environment that is used for growth



Methane production in rumen = lost productivity

Did you know:

- The average cow emits 50-90kg of methane per year, equivalent to 33-60 grazing days lost a year.
- The average sheep emits 6-7 kg of methane per year, equivalent to 30-31 grazing days lost a year.



CN30 opportunities for red meat producers

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Value-based vision come first



Start with a business plan



Do a carbon account to understand your baseline



Decide which carbon opportunities to pursue and align with your business plan



Find out what products/practices are regionally available to suit your enterprise now









Research what products/practices may become available in the future



Update your business plan with products/practices that will benefit your bottom line and have a carbon benefit

CN30 opportunities: Carbon farming project

	Requires offsets/insets	Generates credits	Sells credits	Achieves carbon neutrality	Requires certification	Requires auditing
Australian carbon market (ERF/CSF)		 (ACCUs)	 (ACCUs)	 If only excess credits are sold	 (ACCUs are certified)	 Compliant with CER

or

International carbon market				 If only excess credits are sold	 (ACCUs are certified)	 Compliant international system
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CN30 opportunities: Carbon neutral / low carbon position

	Requires offsets/insets	Generates credits	Sells credits	Achieves carbon neutrality	Requires certification	Requires auditing
Carbon neutral / low carbon farm / business	✓	✓	✗ (uses as insets)	✓	✗	✓ can be done by advisor/professional

or

Carbon neutral / low carbon supply chain / product	✓	✓	✗ (uses as insets)	✓	✓	✓ compliant with certification system
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Carbon neutral/low carbon position

- Define the carbon neutral/low carbon boundary

Most red meat industry stakeholders will seek to:

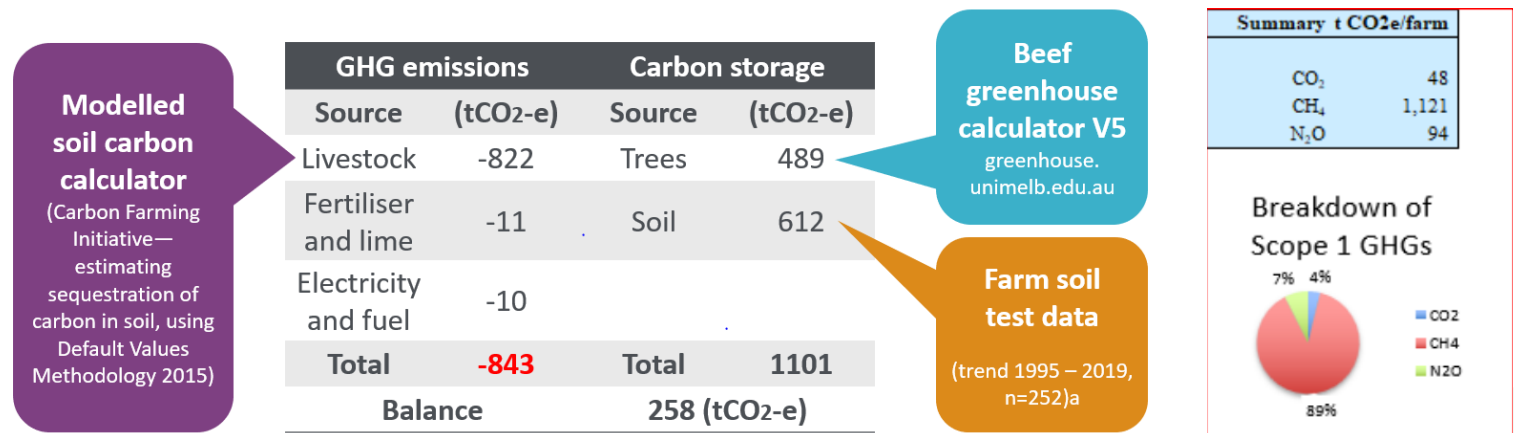
- Obtain a carbon-neutral or low carbon farm/business (certified or not certified), or
- participate in a certified carbon-neutral or low carbon supply chain/branded product line

Hold onto 'credits' to use as insets within the boundary of carbon neutrality/low carbon

- Global
- Country
- State/region
- Business
- Site
- Product

Carbon account and carbon footprint

Carbon account calculates total GHG emissions produced and carbon sequestered on a farm/ property/ business over the course of a year



Inputs: from livestock inventory data, purchased inputs, outputs (i.e. fuel/energy/fertiliser) and carbon stored in trees and soil

Carbon account and carbon footprint

Carbon footprint

calculates total GHG emissions from the complete life cycle of a product

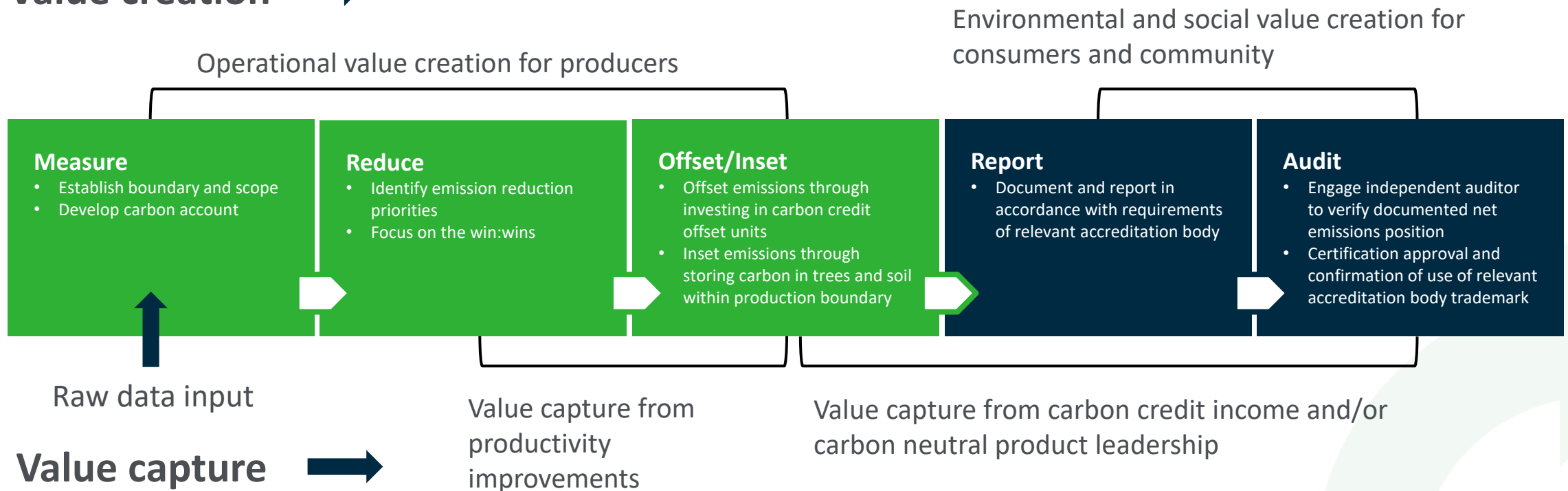
Inputs: all carbon account inputs plus other emissions from production of purchases (ie fertilizer, livestock purchases), transport, packaging etc.



Coles Finest Certified Carbon Neutral Beef

Value creation and capture opportunities on the path to carbon neutrality/low carbon

Value creation →



Marketing insights on carbon products

- Brands require certification for consumers to buy-in.
- MLA-supported market research has revealed that 1 in 4 consumers would be willing to pay 15% more for a carbon neutral red meat option.



Some early movers...

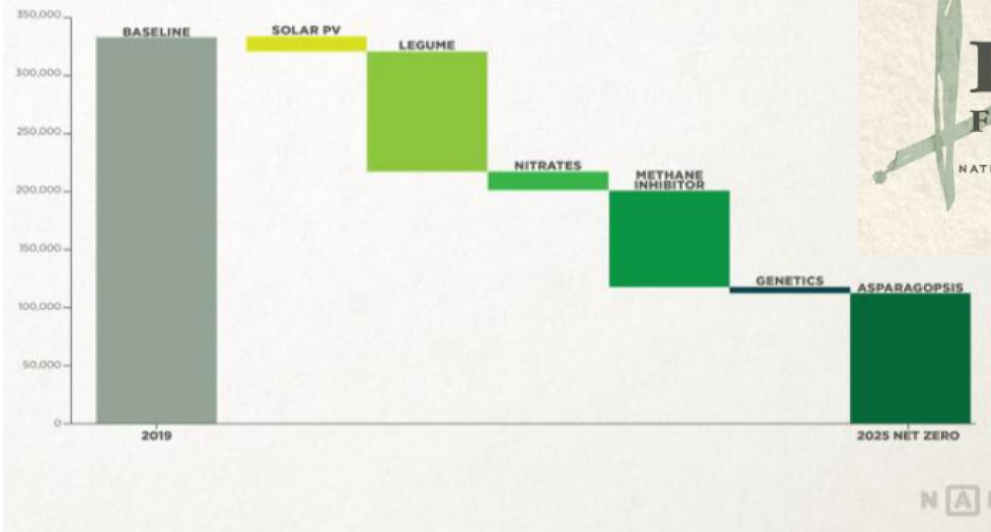
Arcadian is a 100% Carbon Neutral Business



OUR PROSPERITY IS TIED TO THE LAND. WE WANT TO DO EVERYTHING WE CAN TO KEEP THE COUNTRY HEALTHY AND PRODUCTIVE.

OUR GOAL IS NET ZERO EMISSIONS BY 2025

In 2018, Independent Consultants were engaged to calculate NAPCo's Life Cycle Assessment, evaluating the environmental impacts and resources used throughout the full life cycle of breeding, raising and delivering our product to the marketplace.



Some early movers...



Coles Finest Certified



CN30 roadmap

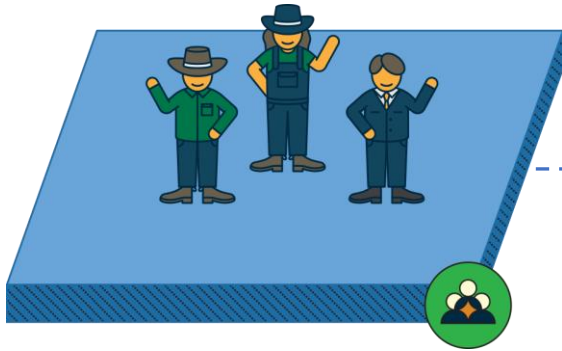
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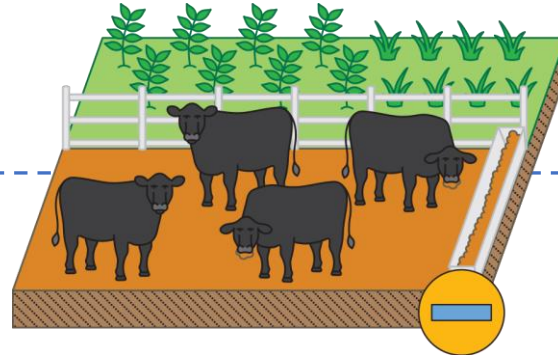
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CN30 roadmap

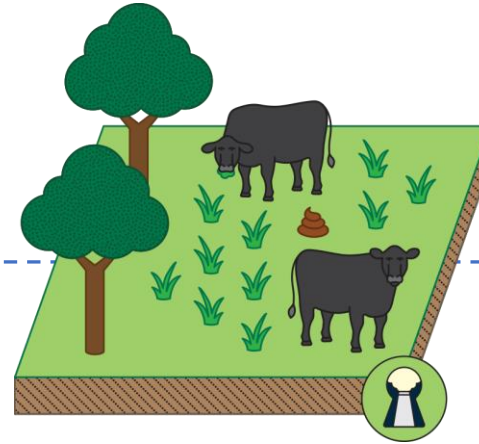


Industry leadership



GHG emissions avoidance

Grazing properties
Feedlots
Processing facilities



Carbon storage

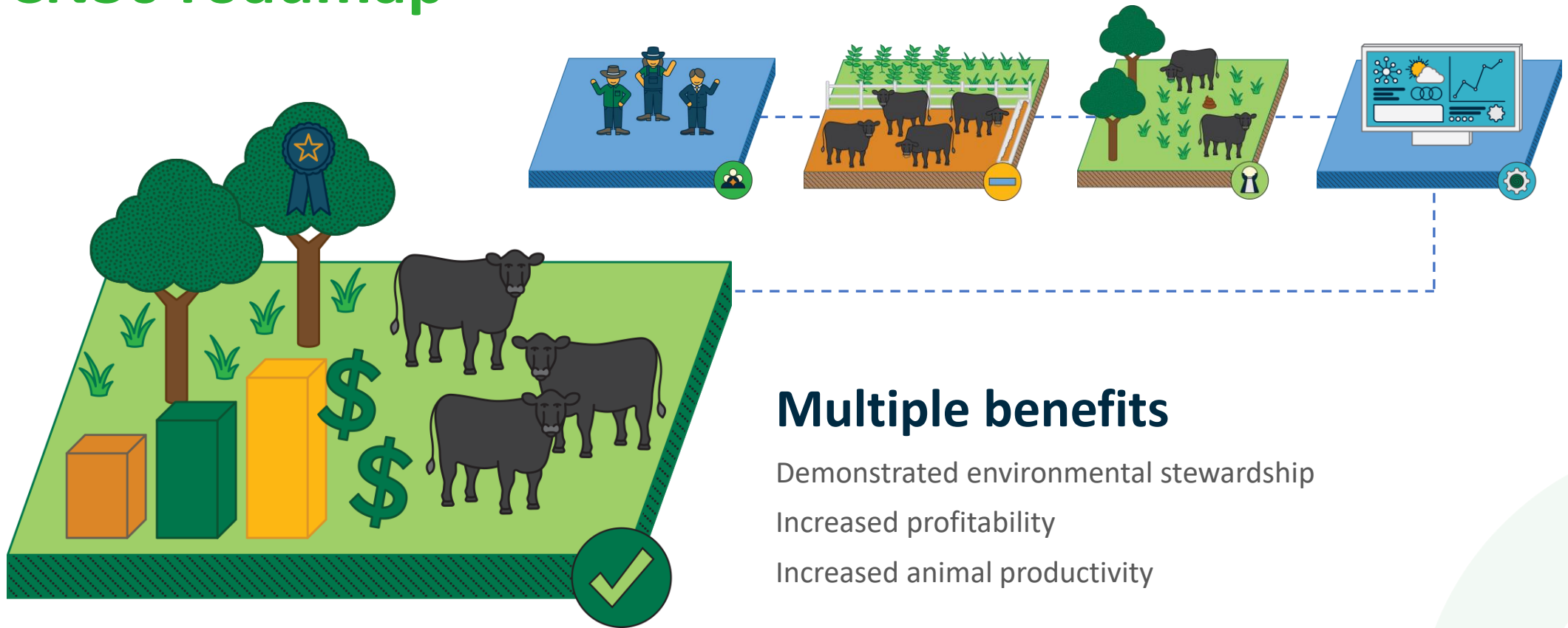
Grazing properties



Integrated management systems

Rapid adoption
Carbon accounting
Measurement and reporting

CN30 roadmap



Leadership building

- Continued improvement to carbon accounting tools
- Carbon accounting and Carbon-101 E-learning modules being developed for inclusion on MLA's Toolbox
- Developing CarbonEDGE package as part of MLA's existing range of EDGE network products
- Embedding Producer Demonstration Sites into new research investments



Emission avoidance partnership (~\$60m)

- 3-NOP early life programming trial
- further work on asparagopsis
- delivery in grazing systems (licks, bolus, water)
- genetic selection (ASBVs and EBVs)
- legumes (leucaena, desmanthus, lotus, sainfoin, tederalia, hedysarum, bisserula) and multi-species pastures.

“Feed additive found to reduce methane emissions by 90% in feedlot trial.”

Beef Central, 12/05/2021

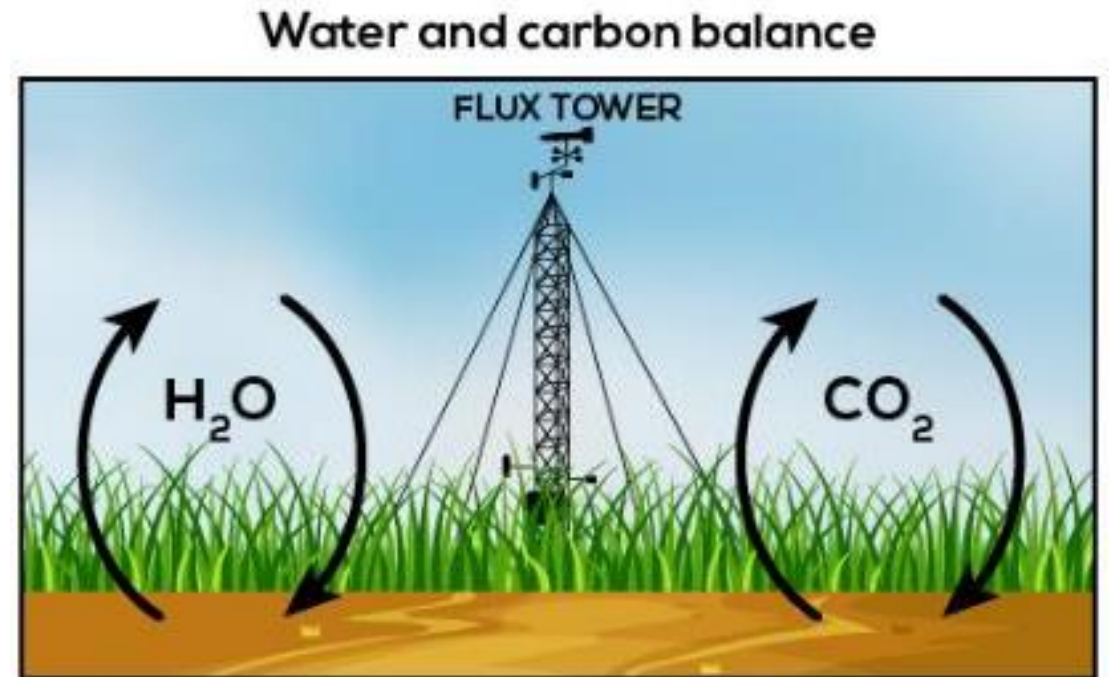
“Cows fed small amounts of seaweed burp 86% less in methane trial.”

ABC Science, 18/03/2021

Genetic selection for low methane is permanent and cumulative – can achieve reduction of 3.5 MT CO₂e for cattle and 1.8 MT CO₂e sheep by 2035.

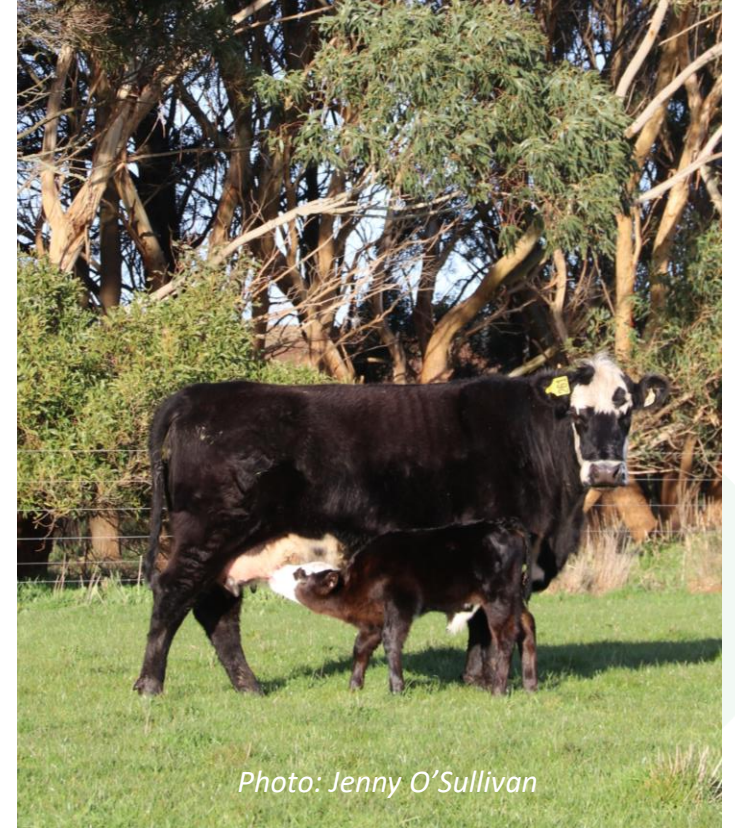
Carbon storage partnership (\$15m)

- Next generation soil carbon measurement methods
 - on track to reduce cost of soil carbon measurement to \$8/ha (the government target is \$3/ha)
 - could reduce the number of soil samples normally taken by producers by three or four times.



Carbon storage partnership (\$15m)

- Mixed species pastures and legumes
- Grazing management
- Decision tools for planting trees on-farm.
- Use of silvopasture systems to promote co-benefits from livestock production



Integrated Management Systems

- Pilot carbon accounting workshops to improve on-farm carbon accounting tools and develop resources
- Working with federal government and other partners to support development of frameworks to underpin participation in carbon projects, supply chains and industry reporting
- Bringing together packages of adoption ready recommended practices and technologies to implement on farm and achieve multiple benefits



CN30 product catalogue

- Released Dec 2021; www.mla.com.au/cn30
- Lists products and services producers can use today or in the near future to make productivity-led net emissions reductions.
- Indicates production systems/regions where these products and services are relevant
- Will evolve as new peer-reviewed knowledge emerges about other existing and emerging products and services.
- Constructive feedback welcome!



Tools and resources

[CN30 Roadmap](#)

[CN30 product catalogue](#)

[Fact sheet for developing a carbon neutral brand](#)

[Fact sheet for becoming carbon neutral by 2030](#)

[CN30 webpage](#)

[Sustainability webpage](#)

[GHG accounting calculators](#)

[Technical manual](#)

[Australian Good Meat](#)

[Red Meat Green Facts](#)

[Australian Beef Sustainability Framework](#)

[Australian Sheep Sustainability Framework](#)



Thank you.