Using Participatory Approaches to Build Soil Carbon in Northern Australia

Ted Parish, Adoption Manager, Northern Beef

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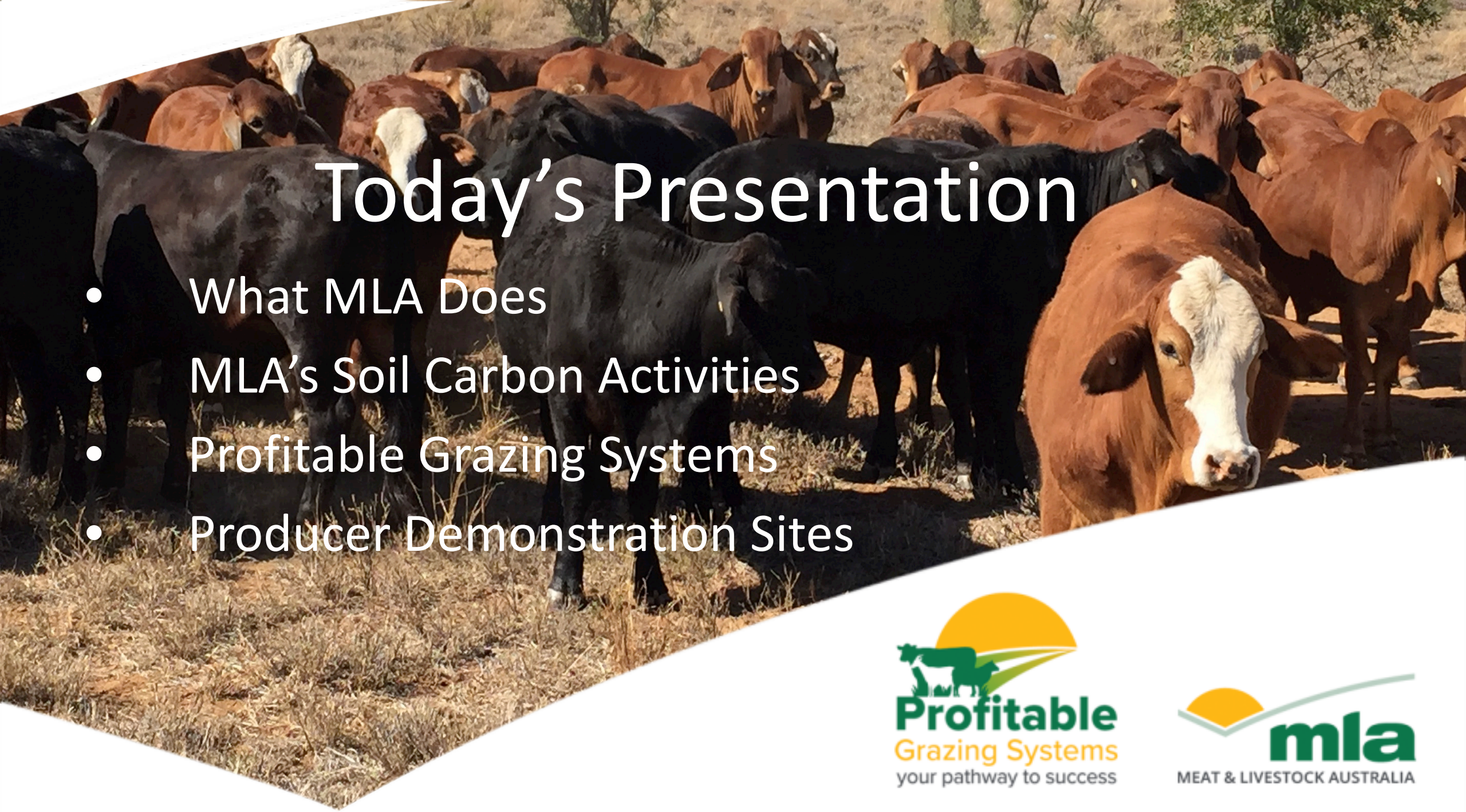

Today's Presentation

- What MLA Does
- MLA's Soil Carbon Activities
- Profitable Grazing Systems
- Producer Demonstration Sites

Profitable Grazing Systems
your pathway to success

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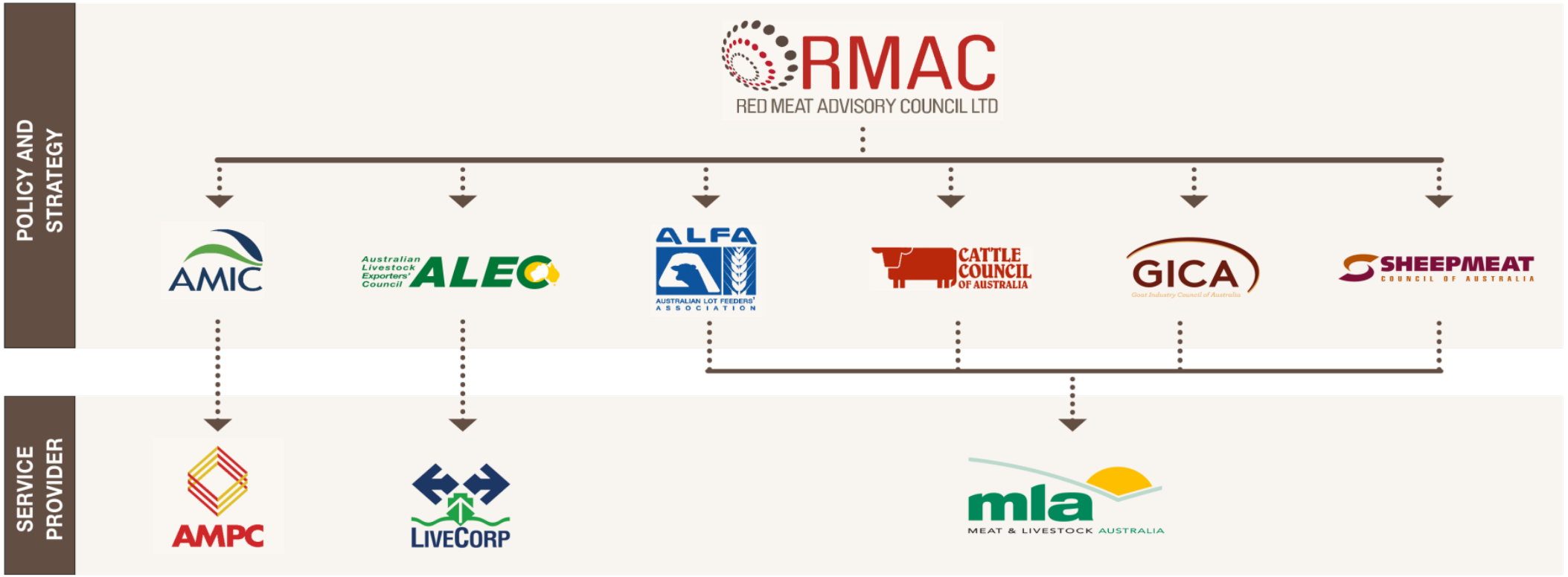
Industry structure



MLA's structure

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Integrity Systems
red meat customer assurance

MDC accelerates innovation in the red meat industry by attracting co-investment from individual enterprises and matching this with Australian Government funding

- National Livestock Identification System
- Livestock Production Assurance
  - NVD / eNVD
- Livestock Data Link
- Big data

MLA's Strategic Plan 2016-2020

Pillar	1 Consumer and community support	2 Market growth and diversification	3 Supply chain efficiency and integrity	4 Productivity and profitability	5 Leadership and collaborative culture	6 Stakeholder engagement
Outcome	The community continues to support and trust the Australia red meat and livestock industry, with industry practices in step with community expectations	Improved access to markets, with marketing programs and value creating innovation driving increased consumer and customer preference and premiums for Australian red meat	Increased returns through the value chain, with participants and customers confident in product quality, pricing and integrity systems	Productivity gains through the value chain from the adoption of tools and technologies	Industry participants are confident in industry leadership capability	Industry participants are confident that the levy investment is delivering value

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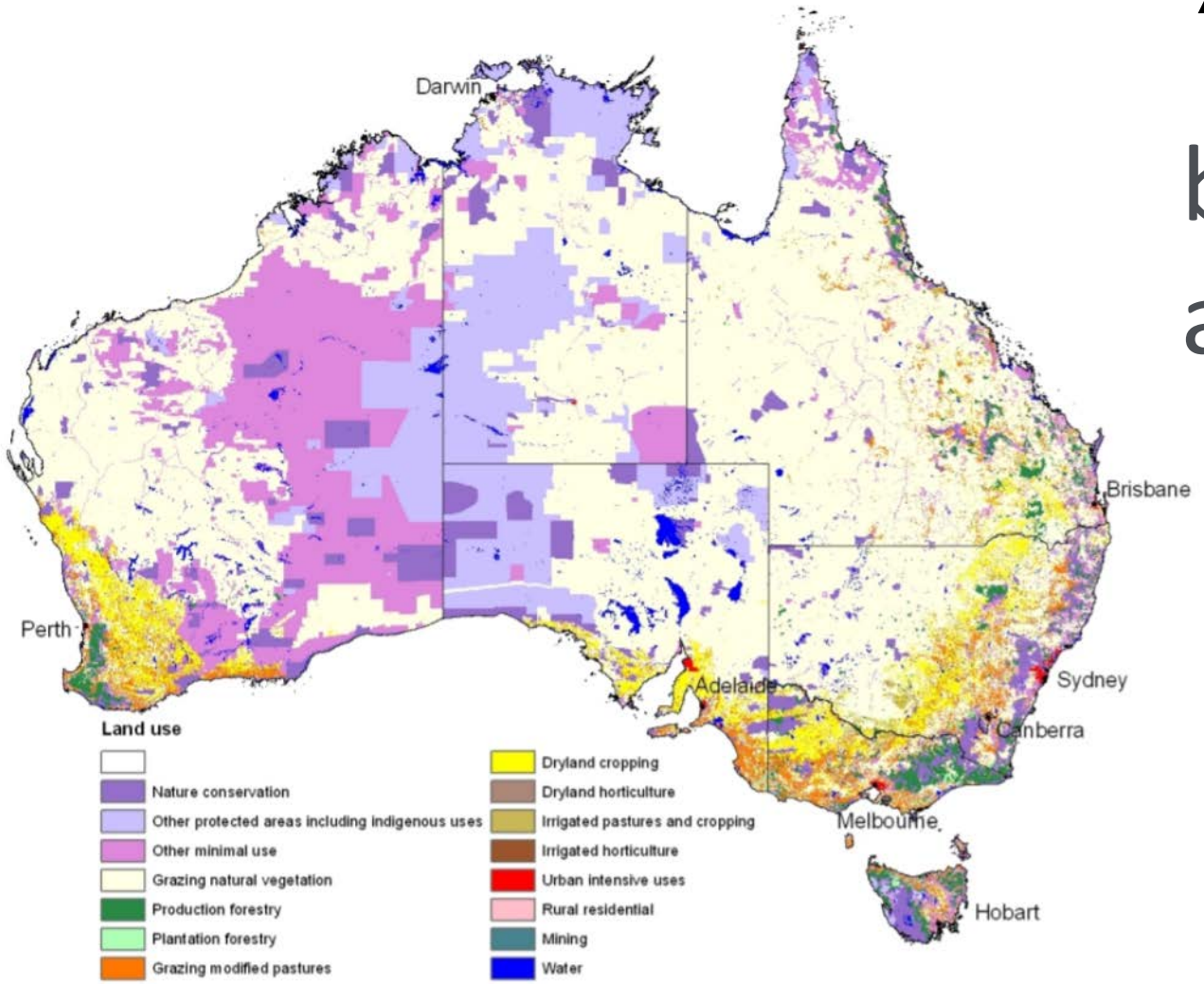
Soil Carbon



↑ soil carbon = better soil, plant & animal health

Soil Carbon

Grasslands and savannahs have the potential to act as upside down forests – storing carbon in the landscape.

Challenge

Permanence – proving the carbon is stored in the soil ‘permanently’ so producers can be paid for soil carbon credits

Cost effective soil carbon measurement technology – so producers can baseline soil carbon levels and then verify increase after undertaking soil carbon project activity

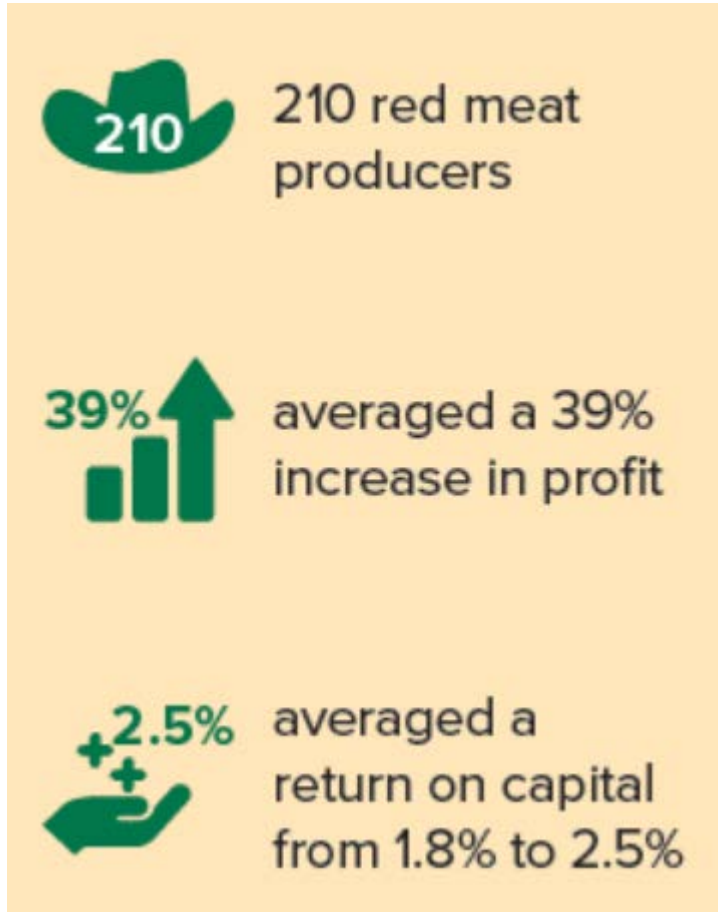
Opportunities for producers

Soil carbon methodology in the Australian Gov’s Emissions Reduction Fund

Soil carbon balances to better understand soil carbon potential and permanency

Profitable Grazing Systems

- A producer upskilling program based on **supported learning (coaching)**
- Producers & deliverers collaborate to decide on topic & structure of their learning activities
- Soon to be >400 producers involved



PGS helps deliver effect positive practice change for livestock producers

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Curriculum approach

- Business and Finance
- People
- Feedbase
- Reproduction & genetics
- Value Chain

- Develop and own training packages
- Off-the-shelf

"Having access to a coach made me feel more confident about implementing the practices because I could ring the coach with any questions or run my ideas of how I intended to implement changes in my own situation and business, and had access their knowledge, experience and support". Laura Hoare, NT.

PGS SLP's

Feedbase

Pasture Principles
Grazing Matcher

Repro & genetics

Lifting Lamb Survival
Benchmarking for Profit
Heifers for Profit

Business

Business Principles
Farming Smarter
Grazing Matcher

People

Power of Engagement
Practical Leader

Value Chain

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your pathway to success

PGS – regionally responsive.

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Producer Demonstration Site Program 2020-25

- Current framework 2015-20, successful

- Industry feedback
  - Strong demand for the program
  - Framework too rigid

- Opportunity for enhancement
  - Flexibility
  - Support
  - Co investment

Framework

The PDS program streams:

1. Levy PDS Projects
2. Co-Contributor PDS Projects
3. Integrated R&D PDS Projects

PDS encourages per to peer learning with producers focusing on a common issue

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The Value Proposition

1 kg

increase in beef carcass weight =

$100 million pa

1%

increase in cattle weaning rate =

$50 million pa

Better

market specification and compliance =

$51 million pa

The on-farm sector needs to lift productivity to around 2.5%pa to remain competitive. Improving onfarm efficiency is a major imperative.
Key drivers of productivity are
1. nutrient supply
2. efficient conversion of feed to quality meat product
3. application of smart labour and tools.

Small improvements at a property level have significant positive industry impact

Become a member of MLA

MLA members receive:

- **Feedback** magazine – stories on your industry in your letterbox five times a year
- weekly e-newsletter **Friday Feedback**
- weekly e-newsletter **Prices & Markets**
- **have your say**…vote at MLA's Annual General Meeting
- invitations to **events** throughout Australia

mla.com.au/membership

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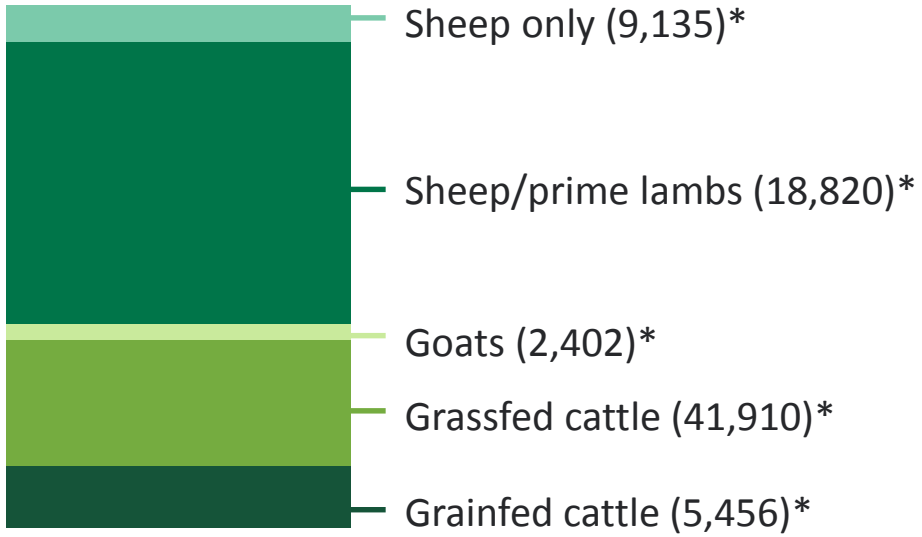
MLA membership – be involved, have your say



TOTAL MEMBERS 49,692

*Includes members with mixed enterprises

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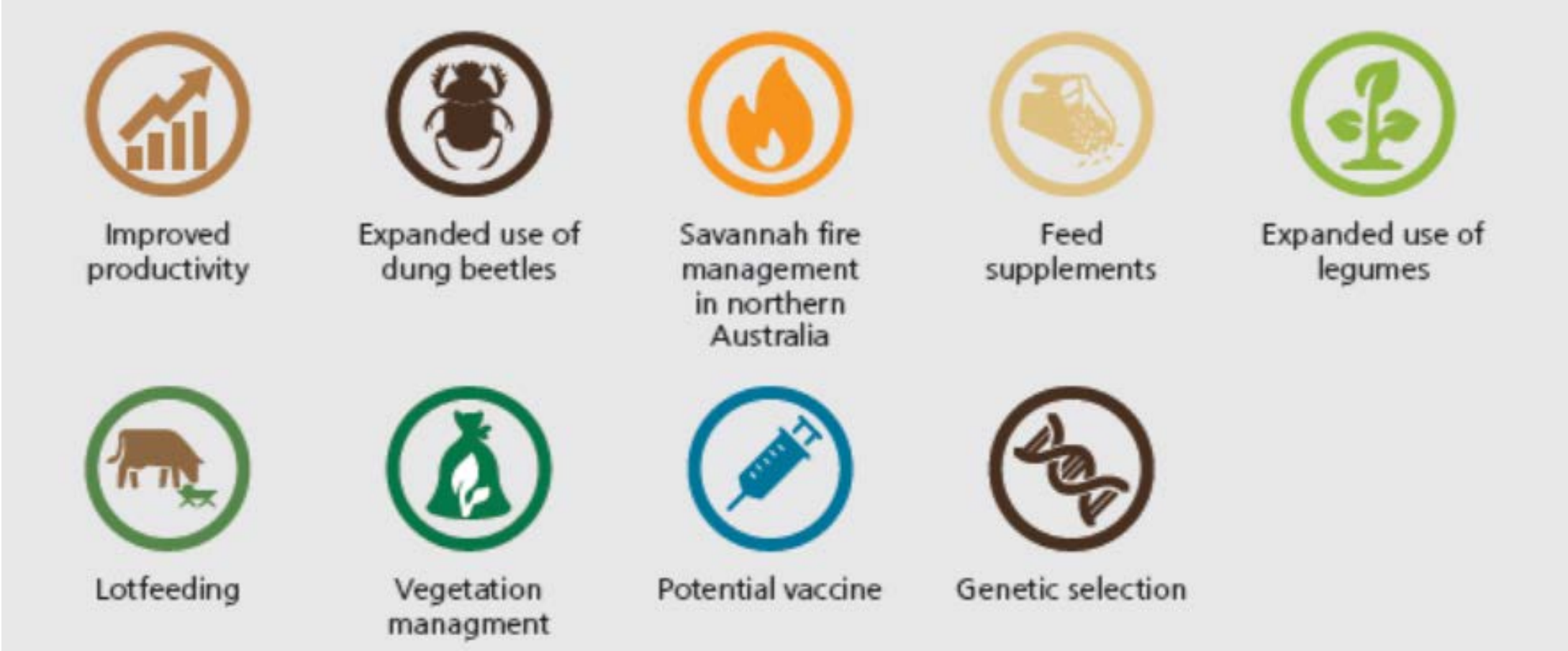
Thank you – any questions?

Potential pathways



Profitable Grazing Systems
your pathway to success

PGS Curriculum Links

	Feedbase		Repro & Genetics				Business		People		Value Chain			
	North	South	Nth Beef	Sth Beef	Sheep	Goats	North	South	North	South	Sheep	Nth Beef	Sth Beef	Goats
Grazing Matcher		X												
Pasture Principles		X					X							
Soils		X												
Diverse Feed		X												
Mixed Grazing		X												
Lifting Lamb					X			X						
Improve Ewe Lamb		X			X			X						
Heifers Profit				X				X						
Business Skills								X	X					
Farm Smarter								X	X					
Benchmark	X				X			X						
Right Mind							X	X	X	X				
Practical Leader							X	X	X	X				
Off-the-shelf	X	X	X	X		X	X	X	X	X	X			X

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Implementation actions

Implement now

Productivity improvements:

- Animal genetics
- Feedbase – pastures & legumes
- Soil health

Balance of vegetation

- Shelterbelts for animal productivity & carbon capture
- Retaining remnant vegetation
- Revegetating where it makes sense to do so

Emissions Reduction Fund methods

- Savannah fire management
- Herd management
- Soil carbon
- Vegetation management

To commercialise

- Feed additives – e.g. Red Asparagopsis seaweed in partnership with CSIRO
- Legumes – e.g. Desmanthus

Further R&D

- Measuring GHG emissions on-farm
- Soil carbon sequestration & measurement
- Methane inhibiting compounds
- New pastures/ legumes
- Optimising balance of tree & grass cover
- New ERF methodologies

Develop markets

- Valuing ecosystems services to increase investment in sustainable agricultural enterprises.
- Verification of red meat products as carbon neutral

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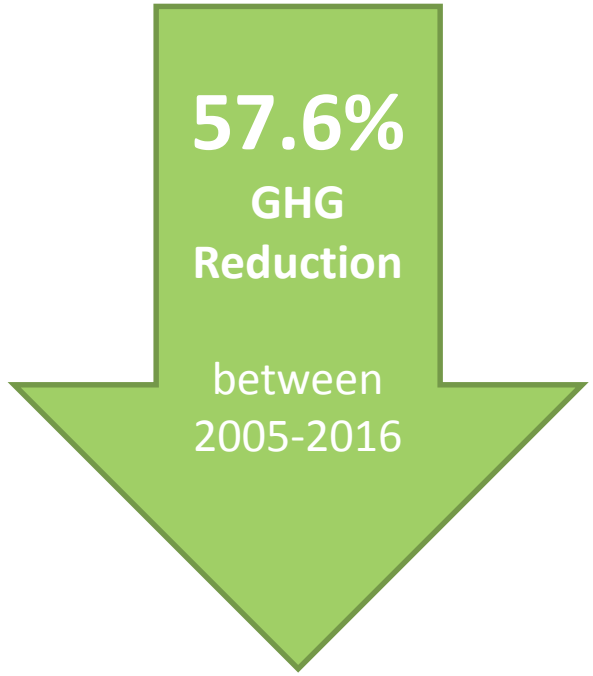
Progress since baseline year

The red meat industry contributes around 10% of Australia's total GHG emissions – predominantly enteric methane emissions from cattle, sheep and goats.

Annual emissions since the 2005 baseline year were 129.3 million tonnes of CO2 equivalent emissions, and reduced 54.8 Mt CO2e in 2016 (57.6% reduction).



How will neutrality be measured?

By 2030 the National Greenhouse Gas Inventory reports:

GHG emissions = Emissions captured and/or offset = 0 tonnes CO2e

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What is CN30 ?

In 2017 the red meat industry set an **aspirational target to be carbon neutral by 2030** to:

- **Strengthen our reputation** as global leaders in sustainable production and turn environmental criticism of the industry on its head.
- **Create new revenue streams and productivity benefit**s through carbon farming and unlock >$300M p.a. for the Australian red meat industry by optimising the carbon cycle to improve drought resilience and farm-gate profitability.
- Provide climate change **mitigation & adaptation options for industry**.

Scope includes enteric fermentation, manure, ag soils, land use change, processing, cropland producing grain for feedlots

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What is the Beef Sustainability framework?

- **Our vision:** A thriving Australian beef industry that strives to continuously improve the wellbeing of people, animals and the environment.

- **Our definition of sustainability:** Sustainability is the production of beef in a manner this socially, environmentally and economically responsible. We do this through the care of natural resources, people and community, the health and welfare of animals, and the drive for continuous improvement.

www.SustainableAustralianBeef.com.au

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HOW IS THE FRAMEWORK USED?

Advise industry where investment in research, development & adoption is required to deliver continual improvement

Foster constructive relationships with stakeholders to work collaboratively on continuous improvement

Help protect & grow access to investment and finance by providing evidence of performance & a clear path to continuous improvement

Promote our industry to the community & customers

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6 key priority areas

Animal husbandry techniques

Profitability across value chain

Balance of tree and grass cover

Climate change risk

Antimicrobial stewardship

Health and safety of people in the industry

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