

The New Zealand Emission Trading Scheme - Agriculture

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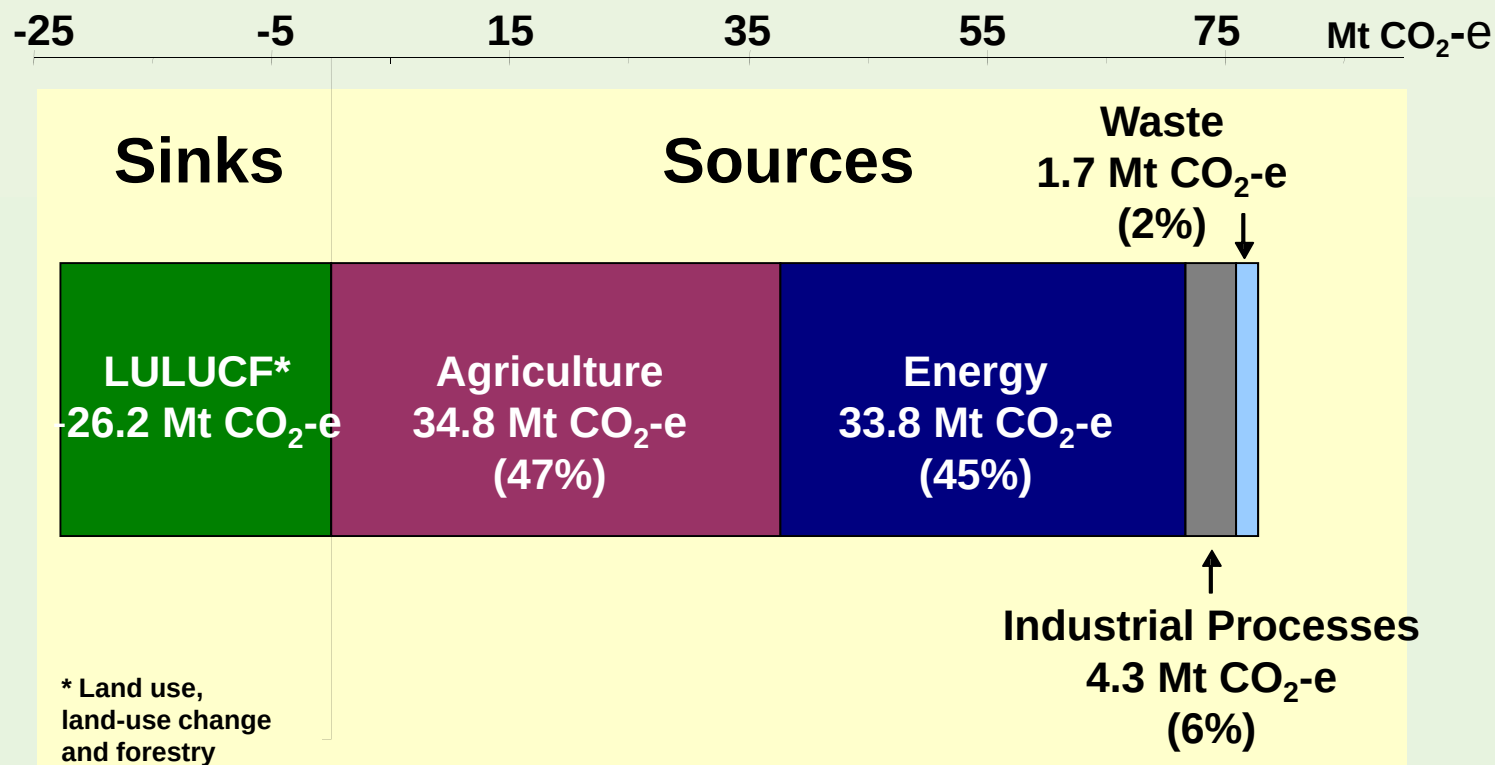
Importance to NZ's economy



- **Agriculture and Forestry represents:**
 - 12.1 % of GDP
 - 11.8 % of employment
 - 64 % of total exports
- **~85% of agriculture produce is exported**



Context - NZ's emission profile by sectors



Source: NZ's GHG Inventory 2010

NZ Emissions Trading Scheme



Sector	Commencement of obligations	Grand-parented Allocation
Forestry (deforestation of pre-1990 forest land and afforestation post-1989)	1 January 2008	55 million units for pre-1990 forestry
Stationary energy (coal, natural gas and geothermal)	1 July 2010	
Industrial process (non-energy) emissions	1 July 2010	To trade exposed industries based on emission intensity
Liquid fossil fuels (mainly transport)	1 July 2010	
Waste and synthetic gases	1 January 2013	
Agriculture (pastoral, arable and horticulture)	1 January 2015	90% of baseline emissions in 2015 phase-out at 1.3% pa

Participants



Dairy processors
Meat processors
Egg producers
Live animal exporters
Fertiliser importers and
manufacturers



Changing the Participant



The participant to be changed from processor to farmer provided:

- Information can be verified
- Leads to a reduction of emissions
- Compliance and administration costs are minimised
- Fiscal costs to the Government are minimised



Regulation development:



- 2010: Exemptions
- 2010: Emission factors and reporting
- 2011: Unique emission factors
- 2011: ETS Review
- 2012: Allocation baselines and process



ETS Exemption Regulations



Species

Horses, Llama and Alpaca, Emus and Ostriches, ruminants other than sheep, cattle, deer and goats.

Threshold level exemption

- Importing fertiliser less than 1 tonne of N fertiliser
- Owning less than 2,290 layer hens



ETS Agriculture Regulations



- Emission factors and information requirements
- Aligned as much as possible with existing industry information
- Trying to avoid:
 - Double counting of emissions
 - Perverse effects e.g. bobby calves
- Trying to:
 - Reflect integrated nature of modern farming
 - Reward efficiency gains
 - Provide participants with certainty

Emission factors and Reporting - Dairy processors



**Cow Emissions =
MS (tonnes) x 6.14**

**Goat Emissions =
MS (tonnes) x 2.69**

**Sheep Emissions =
butter fat (tonnes) x 7.61**



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Emission factors and reporting - Meat processors



Emissions =

**(no. of animals x Em Factor₁)
+
(tonnes of meat x Em Factor₂)**



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Emission factors and reporting

- Fertiliser importers and manufacturers



Emissions =

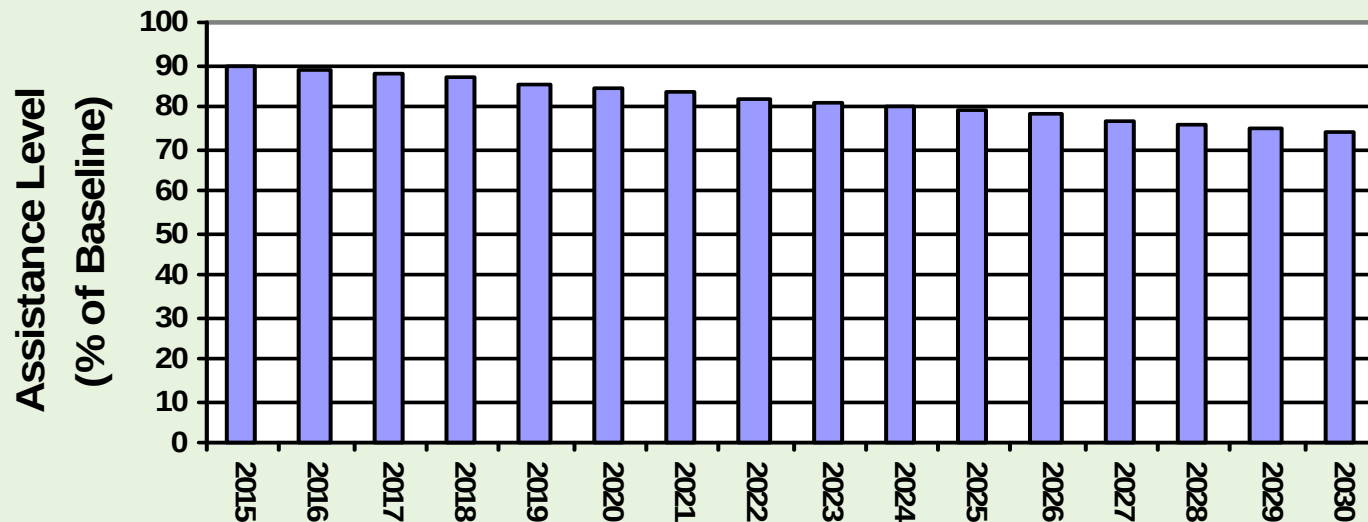
**(N imported or manufactured – N exported)
x 5.72**



Allocation



- Intensity based
- Assistance level is 90% of the baseline in 2015
- 1.3% per annum phase out from 2016
- The baseline will be average emissions per unit of output



How much will it cost @ 2015?



Description	Cost @ \$25/tonneCO ₂ e ¹	Cost @ \$50/tonneCO ₂ e ¹
Kg MS	\$ 0.015	\$ 0.03
Steer carcass (240 kg)	\$11.25	\$22.50
Lamb carcass (17 kg)	\$ 0.94	\$ 1.88
Hind carcass (50 kg)	\$ 2.84	\$ 5.68
Tonne N	\$14.30	\$28.60

¹ 2015 baseline and 90% allocation



Key design features for incentivising action



- Point of obligation
- Emission factors – incorporation of mitigation technology
- Allocation: historic versus intensity

	Point of obligation	
	Processor	Farmer
Number of participants	~200	45,000
Cost pa (\$ millions)	5-7	25-57
Incentive to reduce emissions	Weak	Strong
Compliance	Easy to enforce	More difficult

Complementary measures



- **Information and awareness**
 - Technology transfer – \$2m pa
 - Joint industry/government investment in Overseer - \$5m
- **Investment in research and development**
 - Research investment – PGgRC \$25m, MAF \$40m
 - Research on nitrification inhibitors \$10m
 - Centre for Agriculture Greenhouse Gas Research \$50m
 - Recognition of mitigation technology in Inventory
 - Global Alliance

New Zealand Experience



- Take time to develop methodology
- Continuous development – stepped progression
- Founded on peer reviewed science
- Clear and ongoing dialogue with stakeholders
- Linked to inventory





Need further information?



www.maf.govt.nz/climatechange/agriculture

www.climatechange.govt.nz