2025

Agriculture Emissions Pricing Proposal

Version 2

Updated January 2022

He Waka Eke Noa
Primary Sector Climate Action Partnership

Industry Partners

DairyNZ

beef+lamb new zealand

Agriculture emissions pricing is coming in 2025

With the Government's agri-emissions pricing coming in 2025, there are some big decisions ahead for the farming and agriculture sector.

That's why we worked hard to establish the Primary Sector Climate Action Partnership, He Waka Eke Noa, in 2019 with Government and Māori, so our industry had the best opportunity to develop a sustainable framework for farmers and growers to report, manage and reduce their on-farm emissions.

The current objective of the partnership is to design an alternative agriculture emissions pricing approach to the New Zealand Emissions Trading Scheme (NZ ETS), which is more practical, fair and will incentivise farmers to make positive changes.

If our sector does not take up this opportunity to design an alternative pricing approach and meet legislated milestones, the Government reserves the right to price agricultural emissions in the NZ ETS earlier than 2025.

Your feedback is critical to ensuring the partnership is developing the best possible approach, before recommendations are taken to the Minister for Climate Change and Minister for Agriculture in April 2022. Have your say at one of our nationwide roadshow events or weekly webinars, or submit feedback directly online at hewakaekenoa.nz.

This booklet provides an overview of NZ ETS and the two alternative partnership options, how they work, and how they compare. You can download the final consultation document from hewakaekenoa.nz.

What we're doing

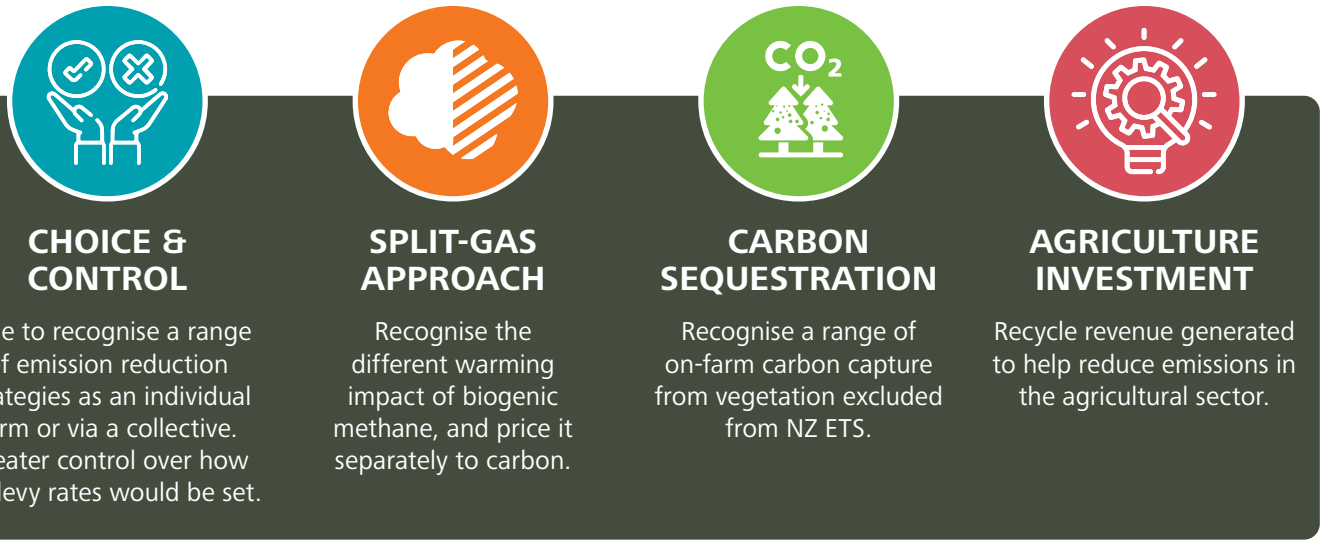
Outside of the partnership, DairyNZ and Beef + Lamb New Zealand continue to advocate on your behalf for:

- Fair and credible methane targets that use the latest science.
- Promotion of GWP* as a better measure of the warming impact of our sector.
- Investment in R&D to find new technology solutions.
- Support for farmers to grow their climate change knowledge and develop a plan through tools, workshops, and on-farm analysis.
- Advocate for further science investment to understand the sequestration of different vegetation.

For more information visit dairynz.co.nz or beeflambnz.com.

The Primary Sector Climate Action Partnership
He Waka Eke Noa

With your help, the partnership's aim is to develop an alternative to the NZ ETS, which more practically and credibly reduces emissions. The partnership has released two pricing options for you to consider: the **farm-level levy**, and the **processor-level hybrid levy**. When designing the options, the partnership had four priorities in mind to make them work better for all farmers.



The partnership has considered four other alternative emission pricing options, and two rebate options for the farm-level levy which were not progressed due to; implementation complexity and cost, required grand-parenting or baselines, unequal methane costs across the sector, or did not drive behaviour to reduce emissions.

Alternative Agriculture Emissions Pricing Options				Farm-Level Levy Rebate Options	
Baseline and credit levy.	**Single market cap and trade scheme.**	**Split market cap and trade scheme.**	**Good management practice (GMP) based levy.**	**Land based rebate.**	**Output based rebate.**
Based on performance baseline.	Similar to NZ ETS but only for agriculture.	Similar to NZ ETS but with split gas markets.	Based on adoption of GMP to reduce levy.	Based on land capability baseline.	Based on performance per kg product baseline.

Agricultural greenhouse gas emissions included

CH_4
Methane

Generated by ruminants as a by-product of digestion. Less than 5% comes from dung and effluent systems.

N_2O
Nitrous Oxide

Released into the atmosphere from dung and urine patches, and nitrogen (N) fertilisers.

CO_2
Carbon Dioxide

Urea N fertilisers contribute to farm CO_2 emissions.

New Zealand Emissions Trading Scheme (NZ ETS)

Backstop

If our sector does not come up with an effective and workable alternative to the NZ ETS via the partnership, the Government has the legislation in place to bring agriculture into the NZ ETS before 2025. This decision would strip farmers' ability to influence change, and they would be faced with a broad-based tax which is forecasted to increase significantly over the foreseeable future.

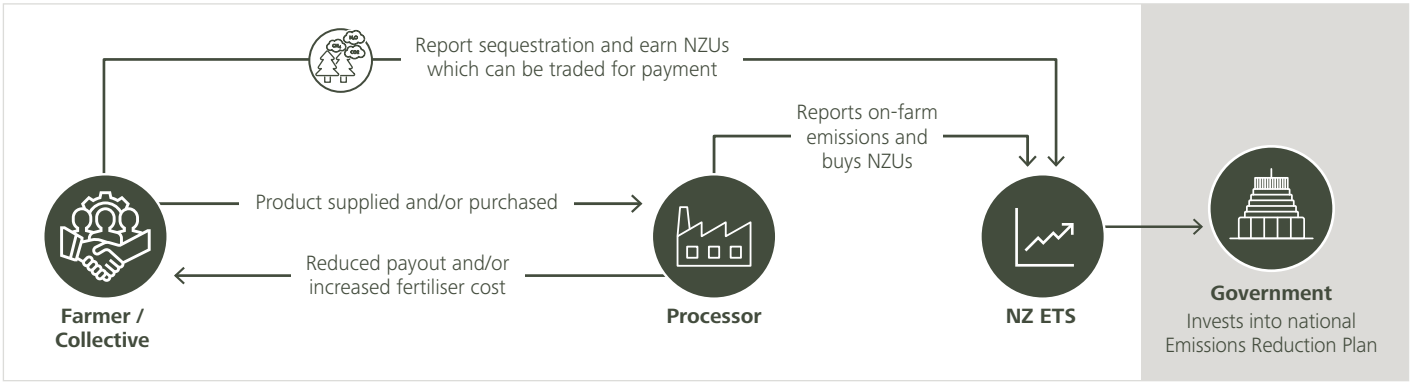
How it works

Within the NZ ETS, the obligations for agricultural emissions would be met by processors, who would likely pass those costs and trading risks on to farmers.

The NZ ETS calculates emissions using industry-specific 'national average emissions factors', which is given to each emission activities based on how intensive they are. The amount of milk or meat produced per kg, or per tonne of synthetic fertiliser used, is multiplied by these factors to calculate the emissions charge.

Short-lived gases, like methane, and long-lived gases such as carbon dioxide and nitrous oxide, would be treated the same using a carbon equivalence metric (CO_2e), GWP_{100}.

Farms could separately enter eligible forests into the NZ ETS to earn New Zealand Units (NZUs) for sequestration, which can be traded on the open market.



Limitations

- ✗ Methane is not recognised as a short-lived gas, and the price would be linked to the carbon price using GWP_{100}. The national average emissions factors would not reflect farm systems that are able to produce less emissions per kg of product. This would reverse the split gas outcome in the Zero Carbon Act which our industry worked so hard to achieve.
- ✗ The only way farms could reduce the cost they pay for emissions would be to produce less meat or milk or use less synthetic fertiliser.
- ✗ Recognition of carbon capture through forestry can be recognised if the NZ ETS eligibility rules are met. However most on-farm vegetation is not currently recognised in the NZ ETS e.g. riparian areas, shelter belts, and small woodlots.
- ✗ Currently any revenue raised would be invested into the national Emissions Reductions Plan, not directly back into agriculture. However, the Government has indicated that any revenue generated could be reinvested back into agriculture.
- ✗ The agriculture sector would have no control over the carbon price because it will be linked to demand for NZUs from other sectors of the economy. As a result it is expected that the carbon price will continue to rise, leading to increased costs to farmers each year despite an overall reduction in agricultural emissions.
- ✗ Agriculture would initially receive a 95% free allocation in the NZ ETS, which means farmers will only pay 5% of their emissions in the first year. The free allocation would decrease an incremental 1% per annum (pa) to 2030. Costs to farmers will increase on top of an increasing carbon price in the NZ ETS.

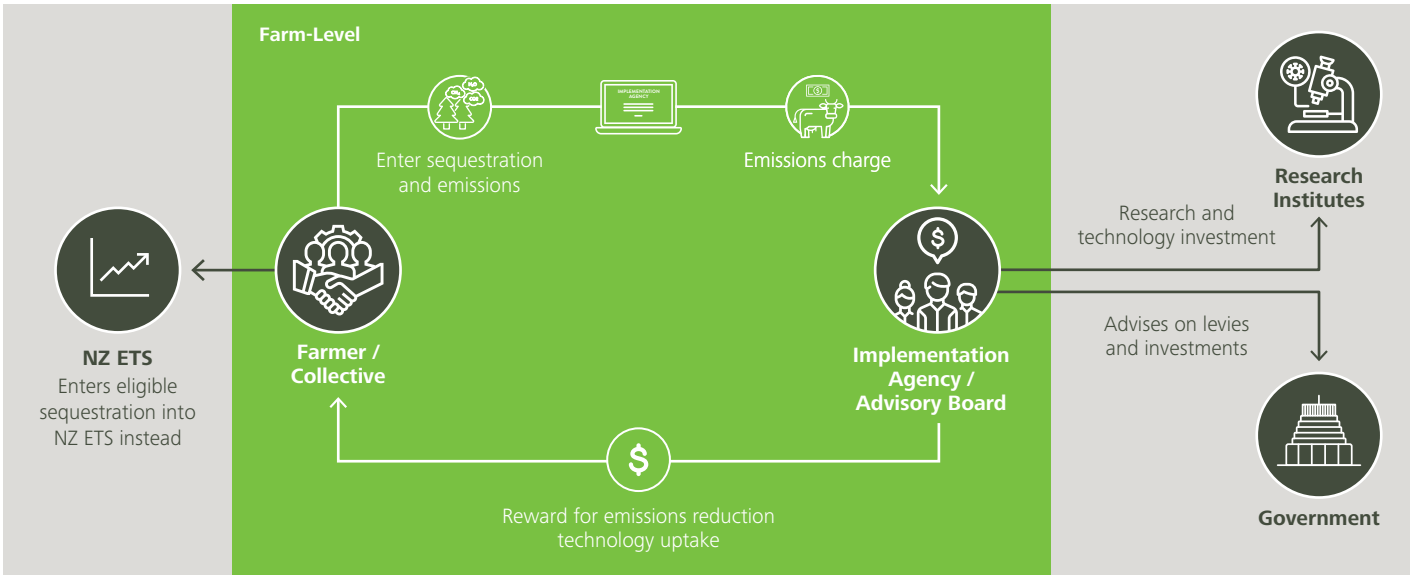
Option 1
Farm-Level Levy

How is the cost calculated?

	A		B		C		$
	The cost that each farm faces for their short-lived gas emissions (CH_4).	+	The cost that each farm faces for their long-lived gas emissions (N_2O, CO_2).	−	The value that each farm is rewarded for their on-farm sequestration.	=	A, B, and C are netted as dollar values, not as gases through a carbon equivalency metric, to total an emissions net cost.
Determined by	The weight of CH_4 calculated (kg). Unique price for CH_4 ($/kg) delinked from the NZ ETS price.		The weight of long-lived gases calculated (kg CO_2e). N_2O price is broadly linked to the NZ ETS, but discounted.		The relevant sequestration rate/s in weight of long-lived gases (kg CO_2e) is applied to area of eligible vegetation.		

How it works

1. Individual farms or collectives calculate their short- and long-lived gas emissions through a greenhouse gas calculator. The calculator will have a simple or detailed reporting process depending on the level farmers want to report their emissions.
2. Entering data could take some time for farmers until reporting processes are streamlined.
3. Different levy rates would apply to short- and long-lived gases.
4. Actual on-farm emissions are used to determine costs rather than using national averages.
5. On-farm efficiencies, mitigations and sequestration will be reflected within the emissions charge (netted as dollar values) as they are implemented.
6. Funds raised would go to the Implementation Agency to be re-invested in the sector, including financial incentives for farmers to use new mitigation technology as it becomes available.
7. Farms that have already taken action to reduce their emissions would be recognised through reduced cost in this option.



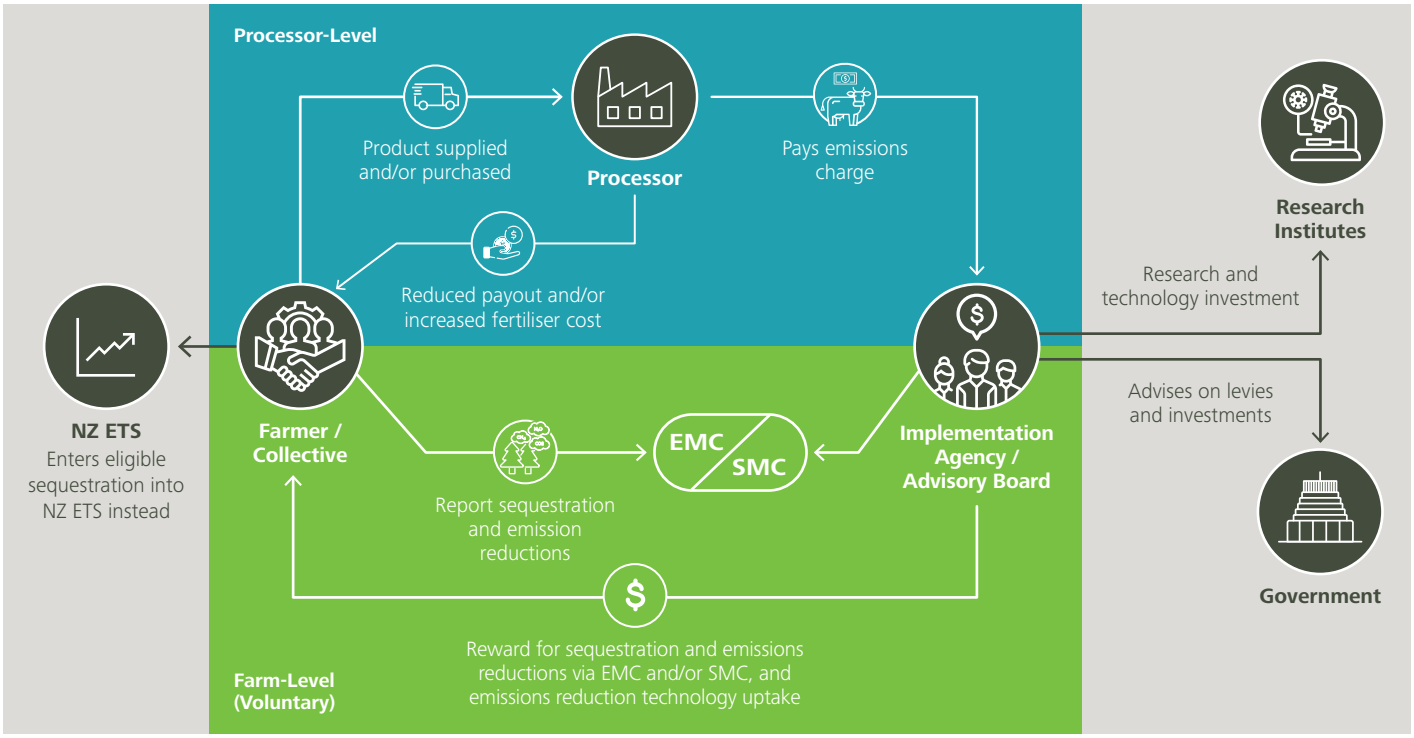
Option 2
Processor-Level Hybrid Levy

How is the cost calculated?

A		B		$		EMC		SMC
The cost that each processor faces for their short-lived gas emissions (CH_4).	+	The cost that each processor faces for their long-lived gas emissions (N_2O, CO_2).	=	These values total to an emissions net cost, where A and B are added together as dollar values.	−	Voluntary contract to receive payment for on-farm emissions reduced.	+	Voluntary contract to receive payment for recognised sequestration on-farm.
Determined by: National average CH_4 emissions per unit of production x amount of product.		National average long-lived gas emissions (N_2O, CO_2) per unit of production x amount of product.						

How it works

1. Each processor would pay for emissions based on national average emissions factors for short- and long-lived gases applied to products supplied, or bought (i.e., fertiliser), by farmers or growers.
2. The emissions charge would most likely be passed onto farmers via a reduced payout, and/or an increased cost of fertiliser.
3. Funds raised would go to the Implementation Agency to be re-invested in the sector, including financial incentives for farmers to use new mitigation technology as it becomes available.
4. Farms (individually or in collectives) could opt-in to a legally binding Emissions Management Contract (EMC) to receive a payment for emissions reductions made on farm and/or a Sequestration Management Contract (SMC) to receive a payment for their sequestration.



Potential Transition

Processor-Level Hybrid to Farm-Level Levy

Based on preliminary feedback received in December 2021, farmers liked the farm-level levy option, however recognised there may be capacity constraints in introducing this system for 25,000 farmers from 2025. There were also some concerns about proceeding with farm-level reporting when there were few emission reduction technologies available.

Another way forward would be to begin with the processor-level hybrid levy then transition to the farm-level levy within 5 – 10 years. This allows farmers who are already taking action on farm to reduce their emissions or count sequestration, by voluntarily entering into an EMC or SMC and get a rebate. The partnership would set up administration systems to ensure a seamless transition to a farm-level approach. This will be discussed at the consultation events.

Estimated costs

The exact costs of the two partnership options are still to be determined, as the value of sequestration and the cost of incentivising on-farm mitigations or new technology are yet to be confirmed.

Farmers can expect levy prices to start at a similar level to the NZ ETS in the 2025 - 2030 timeframe, increasing within that period to generate the necessary revenue to fund sequestration and technology. Over the longer-term (beyond 2030), costs are predicted to be much less than the NZ ETS as agriculture is de-linked from carbon prices within the NZ ETS, and progress is made towards agriculture emission targets.

For both options the partnership is exploring whether a ceiling price could be placed on methane and nitrous oxide levies so to ensure they would not exceed what farmers would have paid in the NZ ETS.

Product costs by sector

The table below shows indicative prices based on assumptions in carbon price from the Climate Change Commission ($85 in 2025 and $138 in 2030). The 2030 estimated prices for the partnership options are expected to be similar to the NZ ETS, full analysis is available within the final consultation document at hewakaekenoa.nz.

	NZ ETS		Farm-Level Levy	Processor-Level Hybrid Levy
	2025	**2030**	**2025**	**2025**
Dairy ($/kg Milk Solid)	$0.05	$0.16	$0.04 - $0.05	$0.05
Sheep, beef, deer ($/kg meat)	$0.10 sheep $0.07 beef $0.15 venison	$0.30 sheep $0.22 beef $0.46 venison	$0.11 - $0.23 sheep $0.08 - $0.17 beef** $0.26 venison	$0.10 sheep $0.07 beef $0.15 venison
Fertiliser ($/kg N)	$0.02	$0.07	$0.02	$0.02

** Under the farm-level option finishing farms typically have a lower cost, and breeding farms a higher cost because of the amount of time animals are on farm.

Emissions Reduction Pathway

For the Government to consider the partnership's recommendations, the options need to demonstrate a credible contribution to the legislated methane targets.

Under existing Government policies only (e.g. National Policy Statement for Freshwater, and Forestry in the NZ ETS), agricultural methane emissions (CH_4) are expected to reduce to by 4.4% by 2030.

If agriculture only faced an emissions price within the NZ ETS, modelling shows a further reduction of less than 1% would be achieved.

Within the table below, modeling indicates that the partnership options will achieve far greater reductions through revenue recycling into new technologies and incentives to drive on-farm change.

If agriculture entered the NZ ETS the Government has indicated that any revenue generated could be reinvested back in agriculture. If this did eventuate, without an advisory board, agriculture would have less say on how revenue would be invested.

		Agriculture Sector		Waste Sector	TOTAL
		Existing Policies	Emissions Levy + Revenue Recycling		
Farm-Level Levy	CH_4	4.4%	4.3%	1.7%	10.4%
	N_2O	2.9%	1.8%		4.7%
Processor-Level Hybrid Levy	CH_4	4.4%	3.9%	1.7%	10%
	N_2O	2.9%	1.7%		4.6%
NZ ETS Backstop	CH_4	4.4%	1% + ?	1.7%	??
	N_2O	2.9%	1% + ?		??

"We've advocated strongly to prevent agriculture going into the NZ ETS and to develop credible alternative pricing options that protect and reward farmers and meet environmental objectives. The Government has agreed to listen, so it's important farmers tell us what they think."

DAIRYNZ CHAIRMAN, JIM VAN DER POEL

Partnership Priorities

Choice and Control

The two partnership options are aimed at providing farmers a practical and credible emissions pricing framework, which keeps farms in control of how they run their business. Below are several ways this will be achieved.

Mitigations

The partnership options will recognise a broad range of emission reduction strategies to give farmers the autonomy to apply them in a way that best suits their values and individual farming system. Aside from sequestration, the range of emission reduction strategies that are recognised by the partnership options will continue to increase as technologies become available.

Advisory board

Under both options, the levy price will be advised by an Advisory Board which will include agriculture sector representatives. The Advisory Board will balance a range of factors that reflect both agriculture's interests and overall climate change objectives:

- Incentivises farmers and growers to reduce greenhouse gas emissions and warming impacts.
- Contributes to meeting New Zealand's targets under legislation and reflects progress towards meeting these targets.
- Supports a productive, internationally competitive, and sustainable agriculture sector.
- Gives farmers time to modify practices and transition to the new system.

Setting split-gas levy rates

Each partnership option proposes to give greater control over setting levy rates. Unique levy rates could apply to methane, nitrous oxide, and carbon dioxide. However long-lived gases could be broadly aligned to the NZ ETS carbon price.

Farm collectives

In either partnership option, groups of farms could have the choice to register as a collective. Within a collective, farmers could work together to report emissions and potentially reduce or offset them. Farm enterprises could link their farms and submit a single emissions return, or processors could use their systems to report on behalf of their suppliers.

Split-Gas Approach

Short-lived gases (methane) and long-lived gases (carbon dioxide, nitrous oxide) have different warming effects. Methane breaks down much faster in the atmosphere than carbon dioxide. The Zero Carbon Act recognises this split-gas approach, whereby biological methane emissions are treated separately to carbon dioxide and nitrous oxide, through a reduction target that does not require methane to reduce to net-zero.

The partnership options use a consistent split-gas approach to the Zero Carbon Act to calculate emissions and set levies. The key strengths of a split-gas approach:

- Recognises that methane needs to slightly reduce, not to net zero.
- Gives farmers flexibility to choose how emissions are reduced on their farm.
- Will not require farms to trade units (NZUs) like the NZ ETS.
- Methane emission price would be based on the weight of the gas, not through the carbon equivalent measure GWP_{100}. GWP_{100} does not recognise the different warming effect of short- and long-lived gases.

Reinvesting into Agriculture

The partnership recognises that innovation, and the uptake of new technologies could achieve significant long-term emissions reductions from agriculture. Some are already being commercialised (such as low-methane livestock genetics).

Fundamental to the partnership options is the ability to reinvest revenue generated from the levy back into agriculture through research and development, or actions on-farm that help reduce emissions. Adaptable regulations and support will also be important, so farmers can rapidly implement new technologies as they become available.

Carbon Sequestration

The partnership options will recognise a wider range of vegetation not currently eligible under the NZ ETS. The process to recognise sequestration on-farm would also be made more practical and accessible to all farmers.

Indigenous
est. pre 1 Jan 2008

At least 0.25ha. Stock must be excluded from area.

Indigenous
est. post 1 Jan 2008

At least 0.25ha. Was in pasture then planted and/or regenerated.

Riparian
est. on/after 1 Jan 2008

1m wide (min.) from the edge of the bank. Woody vegetation including native and/or a mix of non-indigenous plants must be the predominant species.

Perennial Cropland
est. on/after 1 Jan 2008

At least 0.25ha of orchards and vineyards, associated with perennial cropland.

Scattered Forest
est. on/after 1 Jan 2008

Min. 0.25ha for any area counted with min. stocking rate of 15 stems per hectare. May include shelterbelts.

Woodlots/Tree-lots
est. on/after 1 Jan 2008

Up to 1ha and at least 0.25ha of tree species that have greater than 30% canopy cover.

Need to know

- The amount of carbon that different vegetation types can sequester in a lifespan is limited, therefore so is the recognition.
- When vegetation is removed, it can become a source of emissions. All vegetation types recognised will need to be maintained or face a liability if they are cleared and not replanted. (There will be no penalty for damage occurred by adverse events).
- Soil carbon will not initially be recognised by the partnership, although it may be recognised in the future. Current scientific research is not sufficient.
- NZ ETS eligible indigenous vegetation can be entered into either the partnership option or NZ ETS. Farmers cannot enter the same area of vegetation into both schemes.
- Where sequestration is greater than emissions, the partnership is considering providing a credit to be used against future liabilities, a financial payment, or capping the value of sequestration to not exceed emissions.

We recognise that not all sequestration taking place on farms is recognised within this scheme. The parameters have been set based on current science and data available.

A 2008 baseline will be used due to availability of robust satellite imagery, making it easier for farmers to provide evidence that their native or exotic trees were planted after this time.

DairyNZ and Beef + Lamb New Zealand will continue to advocate for further scientific research in areas like the sequestration rates of native trees and soil carbon, to ensure farmers can be fairly credited for on-farm sequestration.

Comparison Table

	Backstop NZ ETS	Primary Sector Climate Action Partnership He Waka Eke Noa	
		Farm-Level Levy	Processor-Level Hybrid Levy
Who is responsible for reporting and paying for emissions?	Meat and dairy processors, and synthetic fertiliser manufacturers/importers on behalf of farmers.	Individual farms. Collectives.	Meat and dairy processors, and synthetic fertiliser manufacturers/importers. Farms and collectives can apply for rebates via an EMC or SMC.
How are emissions calculated?	Product tonnes (meat, milk solids, synthetic fertiliser) x national average emissions per unit of product.	Actual on-farm emissions and farm mitigations, and sequestration are inputted into a central greenhouse gas calculator.	Product tonnes (meat, milk solids, synthetic fertiliser) x national average emissions per unit of product.
How are emissions priced?	Daily carbon price in NZ ETS.	Unique levy rate for biogenic methane and nitrous oxide.	
How can emissions be offset with sequestration?	NZ ETS eligible forests via existing NZ ETS.	Recognises and rewards sequestration from most vegetation types not included in NZ ETS, as either an offset from emissions or as a direct payment. NZ ETS exotic forests are not eligible.	
How will the revenue from the system be used?	Currently any revenue raised would be invested back into the national Emissions Reductions Plan and not specifically reinvested back into agriculture.	Invested back into the agriculture sector to pay for sequestration, reduce emissions further via research and development, and financial incentives for technology uptake on farm.	Invested back into agriculture via EMCs and SMCs which will reward emission reductions and on-farm sequestration, and via research and development to reduce emissions further.
What is required to administer?	Relatively lower set up cost compared to other partnership options as NZ ETS already exists. No reporting required from farmers as processors will administer/pay.	High administration cost in establishing a new reporting system and administration. High reporting input required from farmers.	Medium administration cost compared to other options. Reporting on emissions will not be required from farmers as processors will administer/pay. Farmers who have entered into an EMC or SMC will be required to report against contracted actions.

Scoreboard

To help you understand how each option stacks up against the NZ ETS, we have scored each option relative to each other on nine key metrics.

What can you be doing now?

Because every farm is managed differently, so too will be the emissions profile and emissions reduction strategies of each farm. Knowing what your farm's greenhouse gas emissions are and where they come from is the first step towards reducing them.

Most dairy suppliers have provided farmers with an emissions report and updated existing farm plans to include greenhouse gas emissions. If you haven't received your emissions report, or calculated your numbers yet, your other options are;

- Use an approved GHG tool such as;
  - B+LNZ's GHG Calculator
  - FARMAX – What Is My Greenhouse Gas Emissions Number?
  - Overseer – Our science
- Ask your farm advisor which tool/s they use and what services they can offer you in this area
- Ask your processing company or industry organisation for advice. Some are moving into this area, including providing these numbers for their farmers.

There are many opportunities to reduce greenhouse gas emissions and capture carbon. To help develop an environmental farm plan which best suits your values and farming system visit dairynz.co.nz, or beeflambnz.com for mitigation actions and guidance.

> **“Many farmers have worked hard to reduce emissions and are willing to play their part. They just want to ensure that what they’re asked to do is fair and equitable – and gives them choice and control. We collectively agree and that’s why the NZ ETS would not work for agriculture.”**

B+LNZ CHAIRMAN, ANDREW MORRISON

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