

# Beef + Lamb New Zealand Greenhouse Gas Calculator

The B+LNZ Greenhouse Gas (GHG) Calculator is a free tool for sheep, beef and deer farmers to easily estimate on-farm GHG emissions and sequestration.

Knowing your numbers will give you extra data to base your business decisions on. It will help you build a resilient, future-proofed business and it will give our customers, and the public, confidence that we're taking responsible action on climate change.

The calculator, along with B+LNZ's GHG Action Plan and Farm Plan approach, helps farmers show they are contributing to meeting New Zealand's greenhouse gas emission reduction targets and meeting the He Waka Eke Noa milestones.



## How the GHG Calculator works

The calculator takes information about your farm and your stock and applies science and data about average emissions at national, regional and farm system level to estimate your on-farm emissions.

The calculator covers sheep, beef cattle, dairy cattle that aren't being milked (such as winter grazed cows) and deer.

If you are growing arable crops consider using 'E-Check' from the Foundation for Arable Research (FAR). For milking dairy cattle contact your milk processor.

If you are already using FARMAX or Overseer these can also provide you with an estimate of your GHG numbers.

This information includes:

-  **Stock numbers** throughout the year including births, sales and purchases and stock that are grazed on or off.
-  **Fertiliser, lime and dolomite use**
-  **Woody vegetation cover.** This information helps identify where sequestration is happening on your farm.

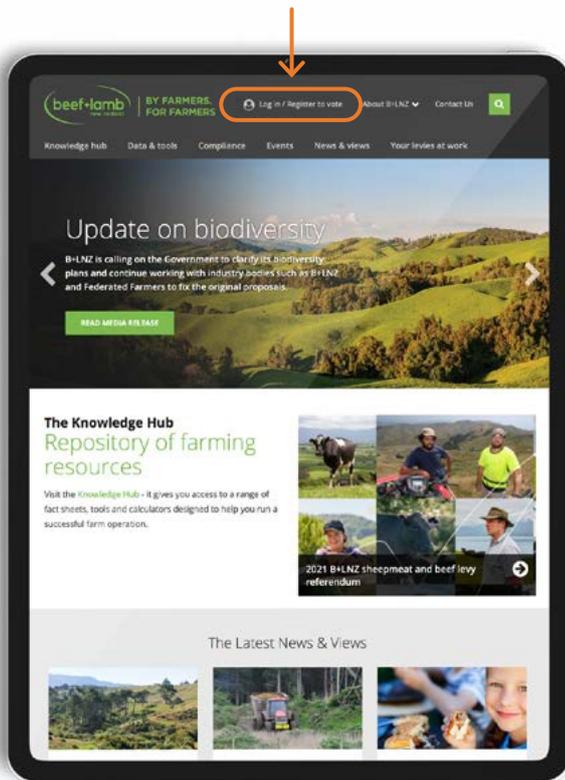


B+LNZ have developed a User Guide, to take you through the tool step-by-step - find it on the Knowledge Hub. And there are videos on B+LNZ's YouTube channel demonstrating its use as well.

## Log in and get started

The GHG Calculator is accessed by logging in to the 'Dashboard' on the B+LNZ website. Logging in means data is securely saved so you can go back and add further information as it comes to hand and access your data in future.

You will need an online account for the B+LNZ website. It's quick and easy to set this up – go to [www.beeflambnz.com](http://www.beeflambnz.com), click on 'Log in/Register to vote' at the top of the homepage and fill in the 'Please create online account' section.



## Workshops

B+LNZ run workshops to help you complete your calculations and Action Plans. Keep an eye on our e-diary, the events page of our website, or contact your Extension Manager for more information.

[www.beeflambnz.com](http://www.beeflambnz.com)

## Questions and answers

### Security

B+LNZ will not share your individual data with anyone without your explicit permission.

B+LNZ will only report on the number of farmers using the calculator; but will not report on any individual farm's GHG emissions total.

### Results and benchmarking

The calculator records your methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O) and carbon dioxide (CO<sub>2</sub>) separately because their impact is different and this reflects Beef + Lamb New Zealand's support of the split gas approach.

The results are also translated into a carbon dioxide equivalent (CO<sub>2</sub>-e) figure, as that figure is currently used in international targets.

(For more information on Greenhouse Gases, see the Factsheets on B+LNZ's Knowledge Hub.)

To see how your number compares to other similar farms based on the B+LNZ Sheep and Beef Farm Survey, the calculator will display your livestock and fertiliser emissions per total ha alongside the average for the farm class and production region you selected.



### Why should I calculate emissions?

New Zealand's agricultural sector has a role to play in contributing to meeting specific greenhouse gas emission reduction targets, as part of international commitments on climate change and in the Climate Change Response (Zero Carbon) Act.

The He Waka Eke Noa partnership, which the red meat sector is part of, puts management and mitigation of greenhouse gas emissions in farmers' hands, instead of a tax at processor level being imposed by the Government.

By the end 2022 we have to show that all farms<sup>1</sup> know their greenhouse gas emissions numbers, and by the start of 2025 all farms have to have a written plan to measure and manage their emissions.

### Can I tell people my numbers?

It's your information so that's up to you. You might want to share your result with your Farm Advisor, or a peer group such as a catchment group, discussion group or action group.

You can download a copy of your inputs and results from the results page of the calculator. When you log in again you can also see all previous completed calculations.

### Why doesn't the calculator account for carbon sequestered in grass or soil?

Sequestration in grass or soil is difficult to measure and fluctuates a lot, for example as grass is eaten or soil dries out. The He Waka Eke Noa programme has therefore decided not to include it in sequestration calculations at this stage and so it is not part of the calculator. However, B+LNZ supports further research on sequestration opportunities and these could be incorporated into the calculator in future.

### I'm a deer farmer – will this calculator work for me?

Yes, this calculator is designed for the red meat sector, sheep, beef and deer.

### I'm a dairy farmer – will this calculator work for me?

This calculator is designed for sheep, beef and deer farms. It can also be used for dairy support/run-off blocks provided none of the area is used for milking. Contact your milk processor, they are helping dairy farmers know their numbers.

### What are our commitments through He Waka Eke Noa?

Through He Waka Eke Noa, we've signed up the following targets:

- By the end of 2022 every farm knows their farm's greenhouse gas numbers.
- In 2025:
  - All farms have a written plan to measure and manage their greenhouse gas emissions (usually in their Farm Environment Plans).
  - A nationwide farm-level pricing system has been designed and tested with farmers and growers, and is up and running.

Meeting these milestones is essential to secure a farm-level approach and avoid the Government instead including agriculture in the Emissions Trading Scheme with a tax at processor level. The B+LNZ GHG Calculator is recognised as meeting requirements for calculating greenhouse gas emissions under He Waka Eke Noa.



## What farms are included in the He Waka Eke Noa targets?

A farming enterprise larger than 80 hectares; a dairy herd with a milk supply number; or a feedlot. This covers about 97 percent of agricultural greenhouse gas emissions and 25,000 farms.

## Who's keeping count towards the targets?

The He Waka Eke Noa partners collectively will report on numbers of farms who know their numbers and have farm plans. B+LNZ will report on the number of sheep and beef farms using its calculator and farm planning approach. Information will also be gathered from other sources. B+LNZ asks for the farms GST number in the tool in order to count the number of unique farms that have completed the tool to help avoid double counting. None of your specific information will be shared.

## Why use this calculator

### There are a number of different calculators - why should I use this one?

B+LNZ has developed and tested this calculator with farmers, drawing on our Economic Service's deep knowledge of the sector, so it's easy to use and reflects the reality of sheep and beef farming.

It's free, and we believe it's the most comprehensive and accurate of the free tools available, because it enables you to more accurately record detail about stock types, numbers and time on the farm. This is important because 94-96 percent of emissions across the sheep and beef sector are from livestock. If you already have your GHG numbers from another tool there is no need to also complete this calculator.

## How does it compare with the calculators, tools or models that you pay for?

Our tool is focused solely on enabling farmers to understand GHG emissions and sequestration at no cost to them, and as something they could complete themselves. It was designed to enable farmers to meet early milestones of the He Waka Eke Noa programme.

## Next steps

### Will there be new versions/upgrades to the calculator?

We are looking for opportunities to enhance the calculator to better represent your farm and to make it even easier to use.

We would welcome comments and suggestions.

Results from the current version will remain valid and will enable you to make comparisons year on year, regardless of improvements.

We encourage you to try the calculator out at the end of the financial year, and see how it works. You can always log back in and do it again later.

Factsheets are made possible by sheep and beef farmer investment in the industry. Beef + Lamb New Zealand is not liable for any damage suffered as a result of reliance on the information contained in this document. Any reproduction is welcome provided you acknowledge Beef + Lamb New Zealand as the source.

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