New Zealand farmers producing more with less

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TE MANA – or Wagyu LAMB

- Innovation
- Efficiency
- Policy disruption
- Climate change resilience
Disruption... 1984;

Removal of family benefit for sheep
30 different production subsidies and export incentives were cut - OVERNIGHT........
It was not easy... BUT....
Farmers responded to market signals, Efficiency and yield increased
Since the 1990s, the sheep and beef sector has made major productivity and eco-efficiency gains and is producing more from less.

Sheep numbers have dropped from 57.9 million to 27.6 million (-52%); resulting in significant reductions in GHG emissions; but lamb export volumes have only declined 8%.

Compared to 1990:
- Sheep numbers: ↓52%
- GHG emissions: ↓40%
- Lamb production: ↓8%
- Land under sheep and beef farming: ↓28%
- Beef cattle numbers: ↓23%
- GHG emissions per kilogram of saleable product: ↓40%
- Nitrate leaching per kilogram of saleable product: ↓21%

Absoluteg greenhouse gas emissions from sheep and beef farms ↓30%

Exceeding NZ’s international commitment of 11% below 1990 levels by 2030.

Sector contribution to GDP has doubled ↑$5 billion

But sheep and beef farmers recognise that there is still work to be done, especially around erosion, sediment loss and climate change.
The agricultural sector is larger
Gross domestic product (GDP) rose from 14.2% in 1986-87 to 16.6% in 1999-2000
Agriculture accounts for 11.4% of the total workforce.

Employment on farms has fallen BUT...
Rural employment has increased
Rural economy has diversified
Rural communities are now less vulnerable to cyclical downturns in agriculture
EMISSIONS PROFILE

- High proportion of emissions from the agriculture sector
- Over 40% of emissions are methane emissions
- Emissions intensity of our economy has decreased by 34% since 1990

![Emissions Profile Diagram](image)
Latest climate projections for NZ

Annual Temperature

RCP2.6 (low emissions)

RCP8.5 (high emissions)

Source: Our Future Climate NZ – https://ofcnz.niwa.co.nz
Latest climate projections for NZ

Change in Number of Annual Hot Days Between 1995 and 2090

- **Hot Days**

Change in Number of Annual Frost Days Between 1995 and 2090

- **Frost Days**

RCP8.5 (high emissions)

Source: Our Future Climate NZ – [https://ofcnz.niwa.co.nz](https://ofcnz.niwa.co.nz)
Agricultural Emissions Trend by Activity

Greenhouse Gas Emissions from Agriculture for Different Activities

More dairy cows
Less sheep

New Zealand’s Greenhouse Gas Inventory 1990-2014
So where too from here?
In short it's all about.....
better genetics, weights at key times, animal health, feed quality and feed management, meteorological information, access to internet for up-to-date market information.

More fertile soils
Farmer training including through Commodity Levy Act funded organisations – Beef+Lamb etc
Data, data and more data – economic, environmental and production information
How.....

Policy and Practice
Climate Change Adaptation
Zero Carbon Bill
Farm Plan (by 2022) – all farms
Extension services
Carbon neutral red meat – Beef and Lamb NZ
Precision agriculture
The Primary Growth Partnership - $708m
National Science Challenges
Innovation

2018 national lambing percentage 129% - up 1.7% on 2017 increased hogget lambing

There is a sheep breeding programme to create a climate resilient high performance New Zealand sheep flock using imported world-leading genetics

Improved pastures, dryland species e.g. Lucerne, chicory, plantain, sub-clover (lower N fertilizer)

Demonstration farms

Tools to monitor and measure climate impact

Inventory development and improvement

Enabled through funding
Questions?