

# A Possible Future of Dairy Farming in New Zealand

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# It is the year 2042

- Dairying is a major export earner
- Dairy farms are profitable businesses
- Water quality is better than 25 years ago and continues to improve slowly year by year

## How Did It Happen?

# Structure of the talk

- **Financial incentives for environmental performance**
- **Environmental legislation and regulation**
- **On-farm practices in 2042**



# Financial incentives for environmental performance

- Farmers have financial incentives to reduce impacts on water quality.
- These incentives reflect real financial returns in the market.
- This is possible because protecting water quality is just part of a much bigger “quality brand”.
- Different components of the brand appeal in different markets.
- Farmers now view protecting the environment as an “investment in a brand” rather than a “compliance cost”.



# The Dairy Farming Carbon Tax of 2018

- Farmers pay a carbon tax based on the emissions from their farming operation and a carbon price set by the government.
- All the tax collected is refunded to the dairy farmers.
- The refund is per kg MS.
- Creates competition between farmers to produce MS with a low carbon footprint.
- Drives down GHG emissions.

# Dairying's 5-Star Rating System - Categories

- Greenhouse gas footprint per kg MS.
- Nitrate leaching footprint per kg MS.
- Farm environmental infrastructure and management.
- Animal welfare.
- Milk safety and quality.



In each category, farmers “compete” for a full-star ranking.



# Environmental Legislation and Regulation

The financial incentives have made  
prescriptive environmental regulation  
unnecessary.



# Environmental Legislation and Regulation

- Regional Councils must *“strive to return water quality as close as possible to the original pristine state”*.
- Environmental performance is best measured by emissions per kg MS.
- *“Best practice”* is determined by what the best farmers are doing rather than by regulation.





# Dairy Farms in 2042

- The fundamentals of dairy farming have not changed.
- The focus is on “profit” not “production”.
- There is a culture of continuous innovation with rapid adoption of new technologies.
- “Hybrid” dairy systems with animal housing and controlled duration grazing.
- Very high standards of animal welfare in animal housing.
- Methane capture in animal housing, milking sheds and manure storage.

# Dairy Farms in 2042

- New pasture species that reduce emissions of GHG and nitrogen.
- Intensive electronic monitoring of animal production and health
- Improved per cow production and longevity in the herd.
- Financial incentives have compressed the range in farmer performance.





# How it was Achieved

- Astute branding created premiums that were passed on to farmers.
- The concept of “trade-offs” between environmental and financial performance became redundant.
- There was no “silver bullet”. Progress came from many small changes.
- Competition between farmers for environmental premiums created continuous improvement and led to the rapid uptake of new technologies.



# How it was Achieved

- Environmental regulation was simplified
- Central and local government set directions, not targets. Constant improvement was the key.
- Industry and government leaders did not let “perfect” be the enemy of “good”.