

Farming Canterbury

KAI FOR TOMORROW



We are
energised by
nature

We have a
pioneering
mindset

We are a
regional
powerhouse

We have
a generous
spirit

Today we are taking you on a journey.

We'll show you how far Canterbury has come with better water management through good farming practice, which includes:



A culture of continuous improvement

- Monitor
- Measure
- Record
- Act

Targeted rules

- Nutrient limits
- Land-use consent to farm

Smarter tools

- Farm Environment Plans
- FEP audits
- Nutrient budgets and baseline
- Farm portal
- Good Management Practices
- Industry and Environment Canterbury support package


This journey is helping establish Canterbury farmers as leaders in growing the food their markets demand by profiling their points of difference.

We arrive at the Legg dairy farm at Harts Creek, a short distance from Te Waihora / Lake Ellesmere.



In the late 1990s local farmers embarked on the restoration of Harts Creek and Birdling's Brook which flow into the lake. With support from the local community, Environment Canterbury, Selwyn District Council, the Department of Conservation and many others, 13 landholders have now undertaken restoration projects on their farms. When you arrive at the Lincoln Events Centre later today, a video of this project will be shown.

The farm is within the recently established Cultural Values Management Area, which recognises the sensitivity of this catchment and its importance to Ngāi Tahu. This farm will be required to operate at Good Management Practice by 2022. The farm has its Land Use Consent to Farm and its first Farm Environment Plan audit is due later this year.



The Legg farm is a good example of adept land management in a sensitive area, where sustainable production has been achieved with a small herd suited to this location, a wide range of pasture species and pro-active farm environmental management.

Andrew and Christine Legg's ayrshire dairy herd at Te Waihora/Lake Ellesmere. They are working to build soil health, cease irrigation, as well as achieving all relevant Good Management Practices.



The Legg family of Lakeside, a district adjoining Te Waihora/Lake Ellesmere in Canterbury, has started working with sustainable soil consultancy Soil Matters as a step towards the goal of a farm without irrigation.*

Andrew and Christine Legg are running what was Andrew's grandfather's farm and ayrshire stud practically on the shores of Te Waihora/Lake Ellesmere.

Andrew says his grandfather chose the farm, which in those days had water in every paddock, as he and his sons had been driving their cows to water from his previous farms.

"About 60 years ago they put drains down each side of our farm and we lost all our water," Andrew says. "But that's why we farm ayrshires. My grandfather didn't want great big heavy cows, and he didn't want jerseys because he didn't think they would produce enough milk. So he started breeding ayrshires, which are somewhere in between." Andrew's grandfather sent his sons to Scotland to bring back ayrshire bulls, as well as using ayrshire bulls from around New Zealand, and ended up with a top herd.

When Andrew's parents married, his mother was a herd tester and would help the Legg family select bulls to increase production.

For a time, Lakeside Ayrshires had one of New Zealand's highest producing ayrshire herds. One of their cows was the North Island champion, then the

South Island champion the following year.

Andrew doesn't have the on-farm labour force his parents enjoyed, so hasn't found much time to show cows.

But his son, John, who will soon take over Lakeside Ayrshires, had a cow in this year's Ellesmere A & P Show.

In recent years, the Leggs have been busy switching their attention from production (they had one of the highest producing herds in New Zealand) to sustainability (they are working to lessen the environmental impact of their dairying operation).

"We've done some things that have taken a toll on the herd as far as production goes," says Andrew.

"So we're working on our fertility and tightening up our calving pattern, and

we feel we'll come right if John can get our soil health happening. His target is to eventually not irrigate at all."

The Leggs have never come close to using their water allocation, and Andrew says the farm is going to lose some of its water allocation.

"But our soil really shouldn't need to have irrigation. We didn't have any when I was a boy, even after the drains were installed and we lost all our water."

John's interest in soil health has him learning everything he can, and he has become inspired to overhaul the farm's fertiliser regime.

Soil Matters has been brought on board to help the family in the use of biological nutrients to boost crop yields and animal performance."

Business NZ Agriculture, January 2018

*Farming without irrigation may be a viable goal for this particular farm, due to factors like its soil profile, availability of springs and location at the bottom of the catchment. This will not be possible for many other farms in Canterbury.

Water Management Goals

Since the Canterbury Water Management Strategy was introduced in 2010, the community has been working together to plan and implement the best ways to manage our fresh water:

- **To support community use (mahinga kai, drinking water and recreation)**
- **To achieve ecosystem health**
- **To support sustainable economic development**

Farming is essential to the economy and as the community's foodbasket. We acknowledge that farming has an impact on the land. Experience and science tell us that farming and the environment can work together, with the right checks and balances.

That's why farmers are required to work to limits.

Our rules are already the toughest in the country. In particularly sensitive areas like Selwyn Waihora, they will continue to tighten. It's about making a difference now, so the effects of the past can be mitigated and we can look to a sustainable, value-adding future.

Farm Environment Plans

To apply Good Management Practices to their own farms, each Canterbury farmer must create a Farm Environment Plan.

Working through the Farm Environment Plan helps them recognise on-farm environmental risks and set out a programme to manage those risks.

Each Farm Environment Plan is unique. It reflects the local climate and soils, the type of farming operation, the requirements in local planning rules, and the goals and aspirations of the land user.

The Farm Environment Plan is a living document; a report card to scrutinise farm performance against each Good Management Practice.

Mahinga Kai Targets

Mahinga kai is about the value of natural resources – our birds, plants, fish, and other animals and resources that sustain life, including the life of people.

Everyone has a part to play in protecting and enhancing mahinga kai. As the current guardians of the land where mahinga kai species live, landowners have clear responsibilities.

Since 2017, farmers in the Cultural Landscape Values Area around Te Waihora in the Selwyn Catchment have had mahinga kai values and targets in their Farm Environment Plans. From this year, many Farm Environment Plans in Canterbury will need to contain specific mahinga kai targets.

Industry Agreed Good Management Practices

In 2015, a group from across the agricultural industries worked together to agree a set of Good Management Practices. This set the standard for what farmers should, at the minimum, be achieving.



In Canterbury today, farming to Good Management Practices is now an accepted part of good business, made up of nine broad areas:

Farm planning and records

Assessing the farm system's characteristics, managing its risk factors, and maintaining auditable records.

Cultivation and soil structure

Maintaining or enhancing the soil structure to reduce the loss of sediment and nutrients to waterways.

Nutrient management

Appropriate management of fertiliser to minimise losses. Ensuring nitrogen loss limits are met.

Ground cover

Ensuring intensive soil conservation measures are in place, and managing crops and pasture to reduce the risk of erosion, overland flow and leaching.

Sediment, phosphorus and faecal bacteria

Reducing the flow and impact of these contaminants into waterways.

Irrigation and water use

Optimising the amount of water needed through careful irrigation management.

Animal feed

Minimising wastage and leaching by effectively managing animal feed processes.

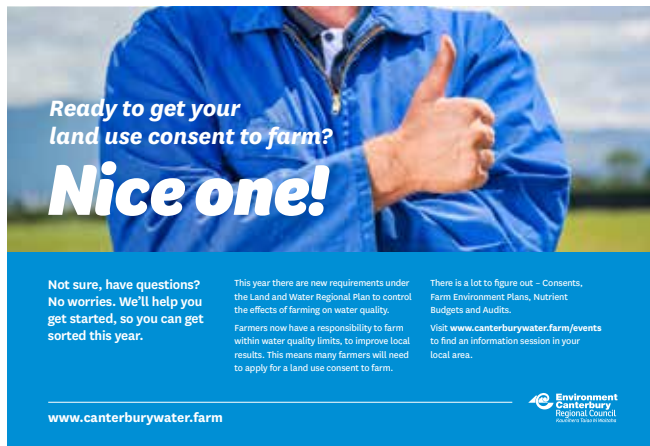
Farm effluent and wastewater management

Using appropriate equipment for storing and spreading farm effluent and wastewater, minimising risk to waterbodies.

Intensive grazing

Selecting appropriate paddocks to reduce nutrient and sediment losses.

Land Use Consent to Farm



Resource consents allow people or organisations to do something, within set standards, that may have an effect on our environment. Under the Canterbury Land & Water Regional Plan, some 2300 farmers now have or require a Land Use Consent to Farm, and a further 1500 are already consented under a collective or irrigation scheme.

The conditions of the consent vary from zone to zone. They make sure the Farm Environment Plan requirements are met and include a limit on allowable nitrogen losses. A condition of the Land Use Consent is that the Farm Environment Plan and the nitrogen limits are audited within a year of approval of the Land Use Consent to farm.

Nitrogen Loss Limits

The nitrogen loss limit is a measure of the environmental footprint within which the farm can operate.

The nitrogen losses for each farm are determined from a baseline of several years' farming operations, and are usually set to reduce over time.

To work out the maximum amount of nitrogen losses, farmers first need to establish their nitrogen losses. This is usually done with the help of a farm advisor.

From Planning to Action – The Farm Environment Plan Audit

The focus in Canterbury has now shifted from planning to monitoring and review of Land Use Consents, property nitrogen loss limits and Farm Environment Plans, and implementation of an audit programme.

Environment Canterbury is the first regional council in New Zealand to introduce such a comprehensive review process.

The Farm Environment Plan Audit recognises all the Good Management Practice work the farmer has done and the limits they are working to, and provides a measurable process to enforce these expectations.

During the audit, the farmer must present evidence that their farming meets the standards expected from the Industry Agreed Good Management Practices, as well as the property nitrogen loss limits and any specific conditions of the land use consent.

Getting ready for the audit takes time, as it involves many different types of evidence. These include records relating to all

Good Management Practices, as well as farm diaries, photos, soil records, inspection sheets, maintenance records and nitrogen loss calculations.

Information is also required for a pre-audit check covering a review of the Farm Environment Plan, the nutrient budget, land use consent, and previous audit results.

The auditor reviews the documentation and asks questions about farming practices. They view the farm, noting Good Management Practices in place and areas for improvement, and provide an audit report, grade, and actions for improvement.

The farmer reviews the audit report before it is finalised and provided to Environment Canterbury, the irrigation scheme or farm collective.

The date of first audits is either 12 months from approval of the Land Use Consent or determined by the farm's scheme or collective.

Timeframes for subsequent audits depend on the previous grade:

- **A grade = 3 years (four within an irrigation scheme)**
- **B grade = 2 years**
- **C grade = 12 months**
- **D grade = 6 months**
- **Change in manager or farm systems = 12 months**

A and B grades are compliant with the Land Use Consent, while C and D grades are non-compliant. To receive an A grade a farmer needs to achieve a high level of competency across all Good Management Practices.

Receiving a C or D audit grade is a signal that something is wrong and the farm is not meeting the agreed Good Management Practices or property nitrogen loss limits. The farmer is expected to develop an action plan in response to the issues identified by the auditor. The action plan will be included in the Farm Environment Plan, and is required before the farmer can receive an A or B grade on the next audit, which will be within 6 months (D grade) or a year (C grade). Another C or D grade will result in enforcement action being taken to require improvement.

Independent, qualified auditors

All Farm Environment Plan auditors are independent and certified by Environment Canterbury or connected to an Environment Canterbury-approved ISO accredited audit programme, such as Synlait's Lead with Pride, to ensure their competency and consistency.

Checks are made on the proficiency of the auditor and their adherence to the Canterbury Farm Environment Plan Auditor Manual. They also undertake training in particular areas such as mahinga kai.

Using audit data

Farm Environment Plan audit information is used for planning and to support Environment Canterbury's work. It is reported to communities, Ngāi Tahu and industry to demonstrate progress towards meeting Good Management Practice standards. This information is treated as private, and is reported at an aggregated level.

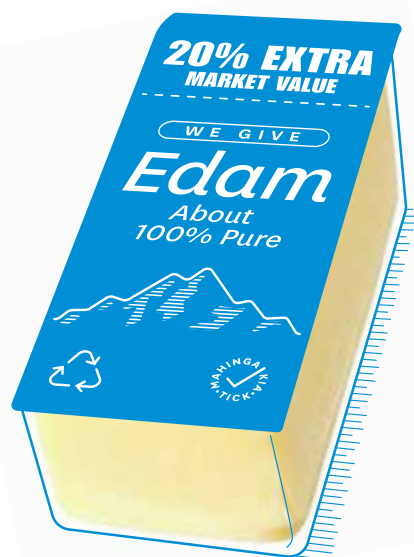
The Future of Farming Started Yesterday

Farming for the future has already started. This is all about putting it right and building trust in tomorrow.

It is Canterbury's story; the community's journey of passion, commitment and collaboration. The benefits are many:

- Water quality that can reflect "100% Pure"
- Practices that support cultural values and mahinga kai
- Community pride
- Environmentally and economically sustainable farming
- A "real" story that adds market value.

Say "Cheese" Canterbury



Just add clean Canterbury water



GMP Keeping Canterbury's powder dry since 2012



ENVIRO



CULTURAL



PROFITABLE



SOCIAL

The future of farming started yesterday