

# THE DAIRYING AND CLEAN STREAMS ACCORD: SNAPSHOT OF PROGRESS – 2005/2006



# 1. INTRODUCTION



Culvert, Marlborough

## Executive Summary

- Progress towards the Dairying and Cleans Streams Accord's five targets continues to be steady in most areas.
- The current levels of non-compliance with resource consent conditions or regional plan rules for dairy effluent management are unacceptable. The national compliance average is only 67 percent versus the 100 percent target set to be achieved immediately.
- Incidences of significant non-compliance with effluent management rules which have the potential for environmental impacts average about 10 percent across the 13 regions where Fonterra farmers operate.
- The targets of excluding dairy cattle from streams, rivers and lakes, and the provision of bridges or culverts over regular crossing points, have already been met for 2007.
- Good progress has been made in the adoption of nutrient management budgets compared to last season. However, a great deal of work is still needed to meet the 2007 target.
- In regions where councils have identified regionally significant wetlands, the 2007 Accord target has been met.
- The Accord partners have committed to an extensive programme of work to improve compliance with effluent management rules, and to increase the uptake of nutrient management systems by farmers. Accord partners will also work together to improve information on regionally significant wetlands.

The Dairying and Clean Streams Accord is an agreement between the Ministers of Agriculture and for the Environment, Fonterra Co-operative Group, and regional councils. Signed in May 2003, its aim is to achieve clean healthy water, including streams, rivers, lakes, groundwater and wetlands, in dairying areas.

The Accord sets out five targets for farmers to meet. These are:

- a. Dairy cattle to be excluded from 50 percent of streams, rivers and lakes by 2007, rising to 90 percent by 2012.
- b. Fifty percent of regular crossing points to have bridges or culverts by 2007, rising to 90 percent by 2012.
- c. One hundred percent of dairy farm effluent discharges to comply with resource consents and regional plans immediately.
- d. One hundred percent of dairy farms to have in place systems to manage nutrient inputs and outputs by 2007.
- e. Fifty percent of regionally significant wetlands to be fenced by 2005, rising to 90 percent by 2007.

Progress is measured by:

- the results of Fonterra's *2005/2006 On-farm Environmental and Animal Welfare Assessment*
- the results of an independent audit of Fonterra's *On-farm Assessment*
- regional council monitoring of compliance with regional plan and resource consent requirements for dairy effluent disposal.

This Snapshot of Progress shows the progress Fonterra farmers have made towards meeting Accord targets during the 2005/2006 season. It records a continuation of the significant progress made towards the targets since 2003, but also highlights areas for concern with regard to compliance with resource consent and regional plan requirements.

**“The Accord partners have committed to an extensive programme of work to improve compliance with effluent management rules, and to increase the uptake of nutrient management systems by farmers.”**

## 2. PROGRESS AGAINST THE TARGETS

Table 1: Progress towards Accord targets

Accord target	2003/04	2004/05	2005/06
Dairy cattle are excluded from streams, rivers and lakes (2007 target: cattle excluded from 50 percent of Accord rivers)	67% <i>a.</i>	72%	75%
Regular race crossing points have bridges or culverts (2007 target 50 percent of regular crossing points bridged or culverted)	92% <i>b.</i>	93% <i>b.</i>	93% <i>b.</i>
Farm dairy effluent is appropriately treated and discharged	n/a	Average compliance level of 67% nationally (See map for more details - only applies to 2005 / 2006)	
Nutrients are managed to minimise losses to ground and surface water (2007 target 100 percent of farms have nutrient management plans)	17%	19%	33%

- a.* This includes suppliers that had no Accord-type waterways.
- b.* Percentage of Accord-type crossings (ie, deeper than a red band gumboot (ankle depth), wider than a stride (approx 1 metre) and permanently flowing).

**“The targets of excluding dairy cattle from streams, rivers and lakes, and the provision of bridges or culverts over regular crossing points, have already been met for 2007.”**

### a. On-farm Assessments

Fonterra’s *On-farm Environmental and Animal Welfare Assessment 2005/2006* has again provided data to measure progress against Accord targets. The 99 percent participation rate is consistent with previous years.

#### Wetlands

As in 2004/2005, the *On-farm Assessment* did not ask farmers questions relating to stock access to wetlands as some regional councils have not yet identified regionally significant wetlands. However, in the regions where councils have identified regionally significant wetlands, the 2007 Accord target has been met. Regional councils are working with farmers to protect wetlands in these regions. As an increasing number of councils identify regionally significant wetlands, this topic will be included in future assessments.

#### Taranaki exception

Certain results from the *On-farm Assessment* vary across different regions. In Taranaki, information relating to waterways (exclusion and crossing) is provided directly by the Taranaki Regional Council through its farm planning programme. This programme is stricter than the Accord as it imposes riparian planting requirements on those farmers with riparian plans and covers a wider range of waterways. Consequently, Taranaki farmers were not asked questions relating to these issues making overall national comparisons difficult.

#### Regional variations

Again, regional differences in the *On-farm Assessment* results are noted. These variations demonstrate the importance of Regional Action Plans. These plans have been developed by Fonterra and the respective regional councils to allow each region to focus on targets particularly relevant to that region and to assist with implementing the Accord. The *On-farm Assessment* is a useful tool to monitor improvement and review where additional regional resources and actions are required.

### b. Independent auditing

Fonterra again commissioned an independent audit of *On-farm Assessment* results collected during the 2005/2006 season.

Over 100 randomly-selected farms in the Waikato, Manawatu and Southland regions were visited by independent auditors during March and April 2006. The audit involved a farm inspection and detailed discussions with each farmer to verify information provided in the *On-farm Assessment*.

The provision of GIS aerial maps by each regional council assisted the process, enabling auditors to identify and measure lengths of Accord-type waterways, stock crossings and the position of effluent management systems.

Due to the relatively small sample size, direct comparisons with the *On-farm Assessment* data are difficult. However, the sample size is sufficient to identify any gaps or inaccuracies in the information and to determine where to focus attention in the near future.

The audit provides transparency for the *On-farm Assessments* and gives farmers an important opportunity to discuss environmental management options and methods on an individual basis.

#### Audit findings

Overall, audit results were found to be closely correlated to the *On-farm Assessment*.

Lack of knowledge was the main barrier to implementing on-farm best practice. This applied particularly to nutrient management and the potential for effluent applied in wet conditions to cause adverse environmental effects.

Although the *On-farm Assessment* did not collect data regarding effluent management, the audit showed a preference to dispose of effluent to land, particularly in Southland. Many farmers also intend to improve or upgrade their systems.

However, the biggest challenge identified in all three regions was managing effluent disposal to land in wet conditions. A lack of sufficient effluent storage was a major concern to the auditors.

Overall, fencing of waterways has increased significantly in the past year and remains a high priority for farmers. Importantly, the audit confirmed an increase in stock exclusion from waterways.

In relation to crossings, the *On-farm Assessment* data was found to be accurate except in the Manawatu, where the number of crossings requiring a bridge or culvert was over-reported in the *On-farm Assessment*. This could be explained by a general misunderstanding of what was a 'regular' crossing and an 'Accord' waterway. Auditors found that culverts and bridges were generally installed across all waterways regardless of whether they qualified under Accord definitions.

The *On-farm Assessment* under reported the nutrient budgeting that was being undertaken in Waikato and Manawatu, but over reported the levels of nutrient budgeting in Southland. This demonstrates the different understanding among farmers of what nutrient budgeting involves.

**Table 2: Audit results for 2005/2006 season (2005/2006 On-farm Assessment data in brackets)**

Region	Percentage of Accord waterways with no stock access	Percentage of farms that had completed a nutrient budget
Waikato	93% (89%)	40% (26%)
Manawatu	70% (89%)	40% (25%)
Southland	92% (93%)	40% (50%)



Fenced creek, Marlborough

#### c. Compliance with regional plan and resource consent requirements

The third Accord target is compliance with resource consents and regional plan requirements for dairy effluent discharges.

Compliance levels are again mixed, with regions such as Taranaki (94 percent total compliance) and Otago (98 percent total compliance) returning better results than the national average of 67 percent.

The map on the next page identifies the percentage of farms in each region which were visited by regional council compliance officers and were compliant with all resource consent conditions.

While these results are still far from the 100 percent target, it is important to distinguish between significant non-compliance and minor or moderate non-compliance. The former is generally defined by councils as non-compliance which has or may have an environmental effect, whereas minor or moderate non-compliance relates to matters such as failing to show a resource consent on a dairy shed wall, or a short-term technical failure.

While the national average for compliance overall is 67 percent, significant non-compliance averages 10 percent on a national level.

Levels of non-compliance are more significant in Northland, Waikato, Canterbury, and Southland. There appears to be a range of factors which have led to the failure to make significant progress towards the 100 percent compliance target. These include herd increases without corresponding increases in effluent disposal system capacity, insufficient contingency capacity for systems in areas with high rainfall, insufficient training, insufficient monitoring and the insufficient use of available sanctions against poor performers. In some areas, more rigorous monitoring undertaken during the year has identified non-compliance issues which were not recorded in earlier years.

Fonterra has worked alongside Dexcel and Dairy Insight to update and market two extensive manuals: 'Managing Farm Dairy Effluent' and 'Farm Management Issues' with both released in October. In addition, Fonterra and Dexcel are running workshops for farmers and rural professionals to promote understanding of good dairy shed effluent disposal practice. Fonterra notes that many farmers are seeking new and better ideas about systems which will both stand the test of time and meet council/ community expectations.

There are clearly opportunities to improve performance. This will be a particular focus of the Accord partners over the coming year.

### **Councils and farmers working in partnership to address compliance issues**

The Tasman District provides an example of the results of the regional council working with farmers to improve compliance levels. On an initial compliance visit during the 2005/2006 season, 33 farms were moderately or significantly non-compliant with regional plan and resource requirements for dairy effluent disposal.

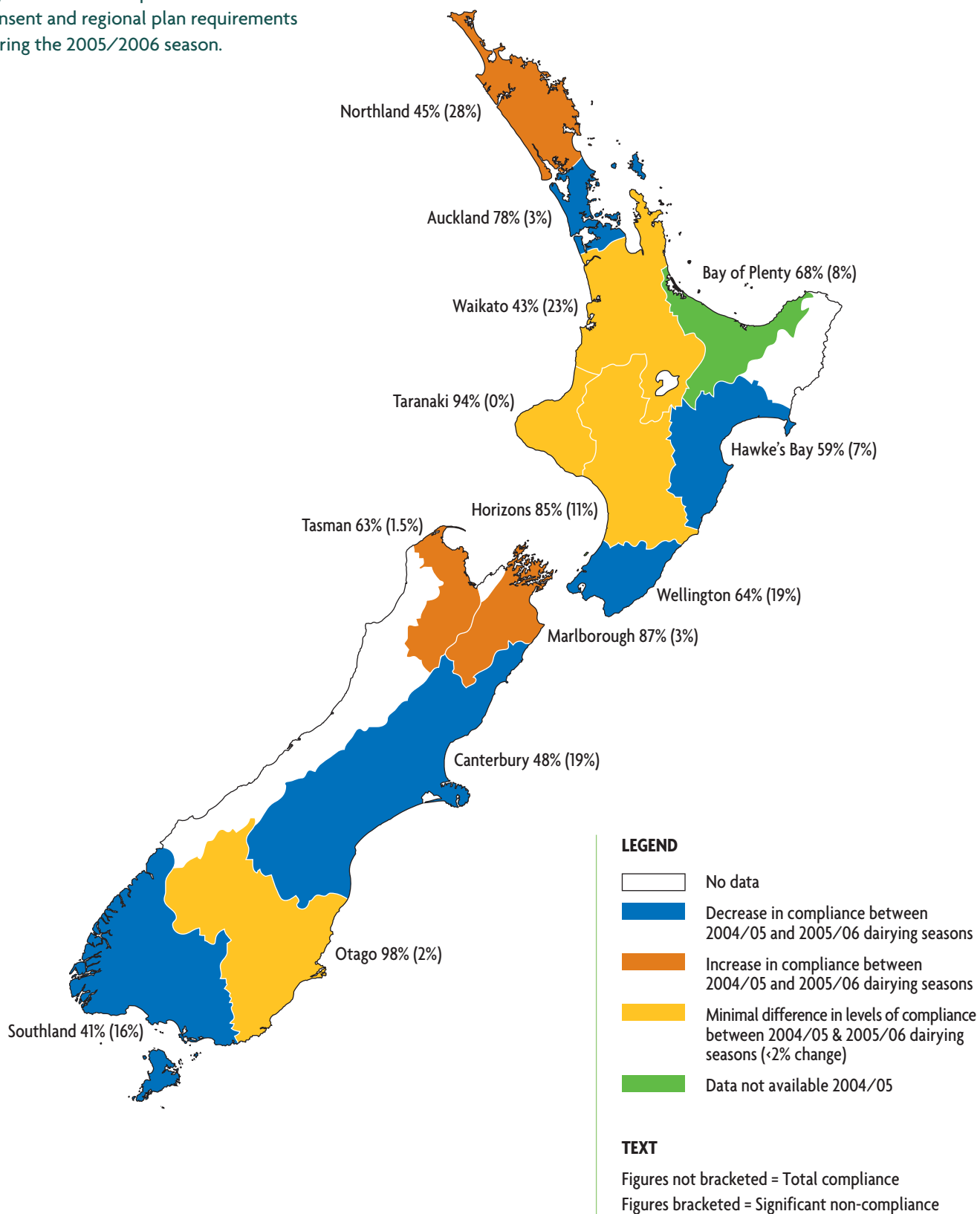
As a result of extensive follow-up work between Tasman District Council and non-compliant farmers, moderate and significant non-compliance decreased to just 1.5 percent of all farms. Work to achieve this goal has included writing farm management plans, as well as using tools available under the Resource Management Act.

The success of the partnership approach has been demonstrated in the Tasman region which has achieved its best recorded compliance rate. Work is underway to ensure that similar results are recorded in all regions in future dairying seasons.

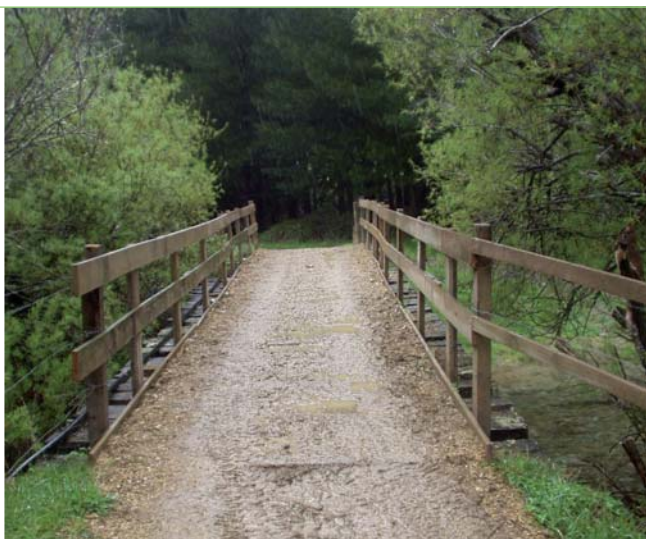


*Waikakahi Stream, fenced off from cattle*

Figure 1: Farmer compliance with resource consent and regional plan requirements during the 2005/2006 season.



### 3. AREAS OF FOCUS IN 2005/2006



Stock bridge, Marlborough

The 2004/2005 Snapshot of Progress identified several Accord targets and issues to work on over the 2005/2006 season. We look at these areas of focus, the progress which has been made and plans for future improvement.

#### Nutrient Management

A key focus for 2005/2006 was improving progress towards the nutrient management target. This has resulted in a marked increase in the number of farmers having a nutrient budget. In March/April 2006, more than 2,000 people attended the nationwide nutrient management roadshow. This is expected to translate into an increased number of farmers with a nutrient budget by the end of the 2006/2007 season.

#### Monitoring

Monitoring the environmental impacts of the Accord began in the 2005/2006 dairying season. The Ministry for the Environment is collating data as part of the long-term monitoring and reporting strategy, with regional council environmental monitoring staff collecting data in each region. A baseline report from which progress can be measured in future will be published by the Ministry for the Environment in 2007.

#### Regional Action Plans

Regional councils and Fonterra have continued to cooperate and focus on the implementation of Regional Action Plans over 2005/2006. An annual review of all regional plans was carried out at the end of the 2005/2006 season.

#### Environmental initiatives which fall alongside the Accord

Environmental initiatives which fall outside of the Accord have also been successful over the 2005/2006 season. These demonstrate the dairy industry's wider commitment to sustainable environmental management.

In 2005/2006, 35 percent of Fonterra farmers carried out riparian planting, an increase of 17 percent from the previous season. Many regional councils are also actively supporting farmers with planting guides, on-farm advice services and providing plants at costs.

Seventy percent of Fonterra farms now have natural shade and shelter plantings for stock, which is slightly up on the 2004/2005 results. The number of farmers who have fenced off native bush on their properties has also increased significantly, from 26 percent in 2004/2005 to 44 percent for this past season. Farmers are continuing to make this voluntary effort, with many councils providing funding to assist with cost.

#### Interesting Accord facts and figures

The *On-farm Assessment* reveals some interesting facts and figures about the New Zealand dairy industry:

- The total number of Fonterra farms has decreased from 11,791 to 11,273. This trend towards fewer, larger farms is consistent across most regions, with the exception of Hawke's Bay, Canterbury and Southland, where farm numbers increased slightly.
- Nationally, 33 percent of Fonterra dairy farms have a nutrient budget included in their fertiliser programme, an increase of 73 percent from 2004/2005 season. There are four regions where 50 percent or more of farmers have nutrient budgets (Southland, Otago, Canterbury and Hawke's Bay).
- Southland has the highest number of farms with Accord-type waterways, but continues to have the highest percentage of stock exclusion.

## 4. LOOKING TO THE FUTURE

### Management Plan

For the 2006/2007 season, Fonterra farmers with stock access to Accord waterways and/or crossings which need a culvert or bridge will have to complete the relevant section of their environmental management plan. This will require a written commitment by those farmers to meet the Accord targets within a certain timeframe, and an explanation of how that will be achieved.

### Nutrient Management

Nutrient management continues to be a key focus for the dairy industry in 2006/2007. The general lack of understanding of what a nutrient budget is, and what it is for, makes sharing information with farmers and promoting correct nutrient management practices a high priority.

Fonterra has been working with fertiliser companies to communicate the benefits of nutrient budgeting to farmers. An extensive three-year programme of work to improve nutrient management is under way, with the strong support of Fonterra, Dexcel and the fertiliser companies.

From the 2006/2007 season, assessors will ask to see a farm's nutrient budget. A re-visit will be carried out in 2007/2008 if a budget is not provided. As well as encouraging the uptake of nutrient budgeting, this initiative will further improve the data collected during the *On-farm Assessment*.

### Compliance Monitoring

Given the results of the previous seasons, another key focus in 2006/2007 will be improving compliance with resource consent and regional plan requirements for dairy shed effluent discharges. This will include a number of activities:

- standardising the definitions for "significant", "moderate" and "minor" non-compliance to enable comparisons to be made across the country. At present, comparisons cannot be made because of the differences in the way councils collect data
- identifying and implementing the best practice compliance initiatives for councils to improve farmer compliance
- improving the technical information available to farmers on issues such as effluent system requirements to enable compliance requirements to be met
- Accord partners working more closely to identify and work with the poorer performing farmers.

### Dairy Industry Strategy for Sustainable Environmental Management

The Dairy Industry Strategy for Sustainable Environmental Management was also released in 2005/2006. This is a key development, as it demonstrates the high importance placed on sustainable environmental management by the dairy industry. The wider dairy industry is now committed to meeting Accord targets, which have been included in the strategy.

### Publish baseline information for environmental monitoring

The Monitoring and Reporting Strategy for the Accord was agreed upon in April 2006 and data collection has begun. Regional council environmental monitoring staff are collecting data in each region as a way to measure the environmental impacts of implementing Accord targets. A first report on these impacts is due before the end of 2007. It will draw on data from four Dairying Best Practice Catchments, eight new 'tier 2' catchments and specific case studies on Accord actions, such as bridging steams. A follow up report is due in 2012.

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