

Who's
putting local
issues on
the national
agenda?

**We are.
LGNZ.**
Te Kāhui Kaunihera o Aotearoa.

1 November 2021

Hon David Parker
Minister for the Environment
Private Bag
Wellington 6140

Dear Minister Parker

Regional council report on Intensive Winter Grazing

I am pleased to provide you with a copy of the second Intensive Winter Grazing (IWG) report on behalf of Regional Councils as requested in your letter to Environment Southland dated 16 March 2021. This is our second quarterly report and covers measured activities undertaken between 1 July and 30 September 2021. We present data on compliance and monitoring activity undertaken by Council's during the three-month period, alongside the continuing efforts of regional councils, MPI and primary sector organisations to encourage uptake of good management practice for intensive winter grazing.

The report highlights the seriousness with which Regionals Councils have taken this matter. It demonstrates our commitment to addressing Intensive Winter Grazing working alongside the primary sector. We do acknowledge that there are still individual farms that are not demonstrating good management practice and these need to be the focus of compliance and monitoring activities by Council's in coming years.

Strong collaboration between primary sector organisations and Council's has continued and overall there has been significant improvements in intensive winter grazing practices observed during the 2021 winter as compared to previous winters. Work is already underway ahead of the 2022 winter grazing season to make further progress on the uptake of good management practice.

Winter grazing was one focus of the video by Geoff Reid that first aired at the EDS conference. We have proactively contacted Geoff Reid and Angus Robson and are continuing a dialogue about their concerns and the regional sector response.

Yours sincerely



Doug Leeder

Chair, LGNZ Regional Sector
Local Government New Zealand

Cc: Minister O'Connor

Report: IWG report to Minister Parker November 2021
Appendix 1 Primary Sector groups activity
Appendix 2 Regional council compliance data

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Intensive Winter Grazing

Local Government New Zealand's Regional Council report on Intensive Winter Grazing

1 November 2021

We are. LGNZ.

LGNZ is the national organisation of local authorities in New Zealand and all 78 councils are members. We represent the interests of councils and lead best practice in the local government sector. LGNZ provides advocacy and policy services, business support, advice and training to our members to assist them to build successful communities throughout New Zealand. Our purpose is to deliver our sector's Vision: "Local democracy powering community and national success."

This report was endorsed under delegated authority by Doug Leeder, Chair, Regional Sector Group, LGNZ.

Executive Summary

This report sets out the actions taken by regional councils' and primary sector organisations to support improvements to intensive winter grazing on crop (IWG) practices in 2021. This report addresses measured activities undertaken between 1 July and 30 September 2021. The report presents data on compliance and monitoring activity undertaken by Council's during the three month period, alongside the continuing efforts of regional councils, MPI and primary sector organisations to encourage uptake of good management practice for intensive winter grazing.

Strong collaboration between primary sector organisations and Council's has continued and overall there has been significant improvements in intensive winter grazing practices observed during the 2021 winter as compared to previous winters. It is also acknowledged by all parties that there are still individual farms that are not demonstrating good management practice and these need to be the focus of compliance and monitoring activities by Council's in coming years.

Work is already underway ahead of the 2022 winter grazing season to make further progress on the uptake of good management practice. Additionally, Councils have committed to complete a satellite monitoring programme with Manaaki Whenua to determine the extent of intensive winter grazing undertaken nationally in 2021. This will enable ongoing monitoring of the extent of the activity and add another tool for Councils to ensure compliance with the NES-FW.

Background

In response to a number of recommendations made by the Southland Intensive Winter Grazing NES Advisory Group (SAG), the Minister for the Environment deferred the implementation date for most of the IWG regulations in the National Environmental Standards for Freshwater (NES-FW) from 1 May 2021 until 1 May 2022. The NES-FW regulations that control further expansion of IWG are now in force.

In a letter to Southland Regional Council and other SAG members dated 16 March 2021 the Minister for the Environment advised the deferment of IWG rules was on the basis that Regional Councils (RCs) and the farming sector, as represented by industry-good organisations, commit to:

- Improve IWG practice during the 2021 year and beyond by rapidly deploying an IWG module that will be a prototype for inclusion in the certified Freshwater Farm Plans (FW-FP) currently under development; and
- Undertake increased monitoring and reporting to ensure there are measurable improvements in IWG practice during the year.

The letter further outlined that the Minister for the Environment expected to see:

1. Farmers putting in place better practices such as providing appropriate buffers that are uncultivated and ungrazed around waterways and critical source areas; and retiring steeper slopes that are unsuitable for IWG;
2. RCs undertaking increased monitoring of IWG practices, and taking compliance action against breaches of the law;
3. More effective monitoring by councils of receiving environments such as rivers and estuaries to show if their health is improving;
4. Council monitoring of the total hectares in IWG, and enforcement of the rule against the area in IWG increasing on any one farm; and
5. Quarterly progress reports to the Minister commencing 1 August 2021.

This report is the second of the quarterly reports and provides an overview of the activities undertaken between 1 July and 30 September 2021 to meet the requirements listed above.

This report is a collaborative undertaking between RCs and primary sector organisations. It was recognised by all parties that this collaborative approach provided the best chance of achieving positive change quickly. The report includes some highlights of the work being undertaken by primary sector organisations to support the uptake of good management practice.

Discussion

A summary of the key activities carried out in the three months to 30 September 2021 includes the following actions:

- Compliance and monitoring activities undertaken by Council staff across the country throughout the three-month period including satellite, aerial and on the ground activities.
- Distribution of the IWG checklist to over 75,000* rural letterboxes nationwide, as an insert into the Stuff distributed Feds News, as well as 21,000 delivered to rural letterboxes properties in Southland and Otago (South of the Waitaki), as an insert into Southern Rural Life by the primary sector. Continued uptake of industry IWG modules and plans that informed, and were informed by, MPI and MfE's IWG module
- Continued activity by the appointed IWG co-ordinator in collaboration with MPI and MfE to support the collection and sharing of good practice advice, relevant updates and extension events nationally.
- Council's committing to undertake a project in collaboration with Manaaki Whenua to benchmark the extent of 2021 IWG nationally.
 - Continued implementation and significantly increased promotion of an IWG hotline to receive and act on IWG queries and complaints.
 - 1,700¹ IWG plan downloads from primary sector organisations. This is a fivefold increase in uptake of IWG modules by farmers compared to 2019 and 2020.

¹ These figure are for the 9 months from 1 January to 30 September 2021.

Regional sector

The focus for the previous three month period was to complete compliance and monitoring activities, respond to complaints and maintain extension activities which work with farmers to educate them on good management practice.

Compliance and monitoring activities were undertaken using a combination of fly-overs, satellite imagery and on the ground inspections. Some follow-up site inspections were delayed due to Covid-19 Alert Level restrictions. IWG was generally assessed as compliant under current rules, with some technical non-compliance identified with the future NES-FW rules. In general farmers undertaking IWG activities were found to be demonstrating good management practice. The majority had engaged with one of the many groups providing guidance and support on IWG practice. Appendix 1 of the report shows the IWG related activity undertaken by Council's.

Overall a very low number of complaints were received regarding IWG activities. A total of 16 complaints were received by Councils nationally with 11 of these leading to incidents being recorded. In total these incidents led to one formal warning, one abatement notice and two infringement notices being issued. The majority of Council's were engaging with farmers to ensure they were aware of the upcoming changes to the IWG rules under the NES-FW, and promoting the material available to educate them on good management practice.

There has been comment from some parties about the poor standard of some IWG practice. Reports from the community or other interest groups are welcomed and can be helpful to guide Councils' attention. Councils always encourage specific reporting of poor practice where it is identified, including location, as it ensures that the resources available are focussed on the areas with the highest risk. Where non-compliant farms are found, appropriate enforcement taken is consistent with the national Strategic Compliance Framework.

During this reporting period there have been cases of reporting poor standard practice through the media, via video recordings and photos, sometimes without any connected reporting to the IWG hotline or regulatory authorities. Usually these have appeared in the media weeks after the event with no location information provided, making it very difficult for industry or regulatory authorities to investigate. We urge all parties who witness poor IWG practice to report this as soon as possible.

Environmental monitoring of receiving environments

As indicated in the previous report increased monitoring of receiving environments is expected to occur as part of the broader suite of freshwater monitoring required under the new NPS-FW. Comment was sought from the Regional Sector Science Special Interest Group on the potential impacts of improved IWG practices on water quality. They have provided the following comment:

We know that implementation of best practice management of winter grazing areas does result in significant reductions in N, P, sediment and E. coli losses to waterways. For example, the following research by Prof Rich McDowell (Our Land & Water Chief Scientist) and others measured changes in the loss of contaminants associated with Standard Winter Grazing of fodder crops in Southland vs. a Strategic Winter grazing approach (targeting management of Critical Source Areas to reduce overland run-off from grazed fodder crop) vs. pasture grazed by sheep.

Monaghan, R.M., Laurenson, S., Dalley, D.E. and Orchiston, T.S., 2017. Grazing strategies for reducing contaminant losses to water from forage crop fields grazed by cattle during winter. New Zealand Journal of Agricultural Research, 60(3), pp.333-348.

The authors said "From this comparison, it is evident that (i) total mean annual fluxes of N,

P and *SS* from the standard winter grazing treatment were much greater than from pasture and (ii) overland flow was the most important pathway of loss for these contaminants.

Implementation of the strategic grazing method decreased total estimated fluxes of *N*, *P* and *SS* in overland flow and subsurface drainage by 66%, 67% and 80%, respectively...Combined fluxes of *E. coli* in the strategic treatment were half those of the standard treatment.

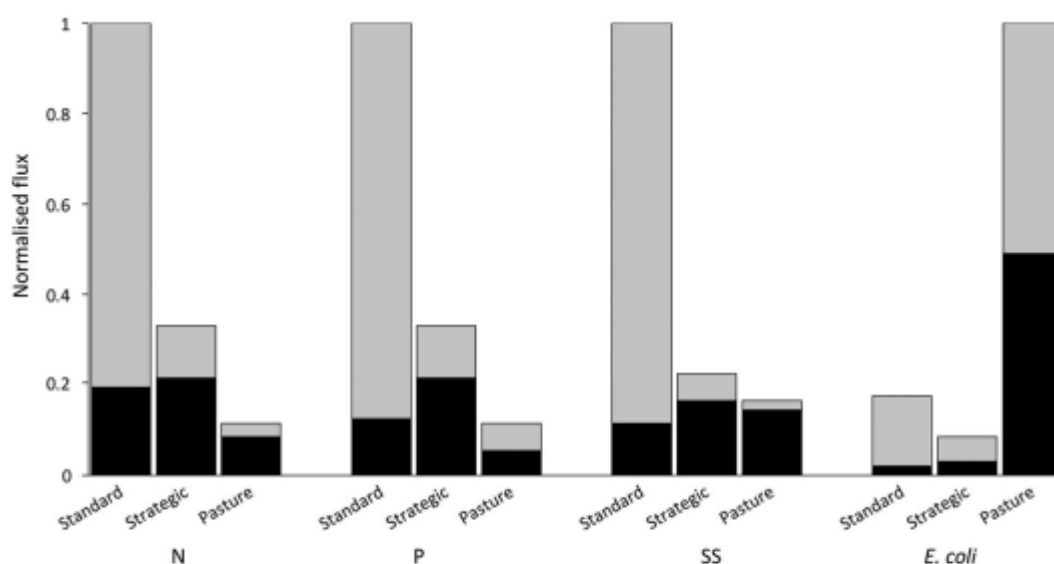


Figure 5. Normalised fluxes of nitrogen (N), phosphorus (P), suspended sediment (SS) and *E. coli* in overland flow (grey bars) and subsurface drainage (black bars) under standard winter, strategic winter and pasture (sheep) grazing managements. Fluxes of N, P and SS have been normalised against those estimated for the standard winter grazing treatment; fluxes of *E. coli* have been normalised against estimated fluxes for 2014 when the catchments were returned to pastoral use and grazed by sheep.

Additional comment was sought on the potential to observe these changes through the ongoing monitoring of receiving environments.

Benefits realised through improvements to IWG practices will be more detectable locally, close to where the activity is occurring. The ability to pick up the results as a part of state of environment type monitoring, which is typically monthly samples at larger river sites, will generally be limited unless the level of intensive grazing is a significant contributor to the background N, P Sediment etc at these sites. The timing of the changes in losses may also be significant. One consideration is if the reduction from the footprint in a catchment that has intensive grazing is primarily a reduction via overland flow and that this might occur typically at times when other overland flow processes are increased in the catchment, for example during rainfall events, it may be that the benefits of improved practice may be expressed in the environment when background levels are high due to other overland flow processes, increased flows in rivers etc. This would likely make detecting the change harder as it is relative to the other inputs in the catchment.

Total Area in IWG

At present, a range of methods are being used to assess the extent of winter grazing being undertaken. This includes a variety of satellite imagery and mapping tools to identify winter grazing areas and assess risk. In some instances, Councils are not currently monitoring the extent of winter grazing. This may be due to it not being a common activity in a particular region. This has been identified as a risk and has led to the development of a nation-wide project to fill this regional data gap.

The regional sector with the support of the Ministry for the Environment have now committed to a satellite imaging project with Manāki Whenua to determine the extent of IWG undertaken in the 2021 year. This exercise will then be repeated in future years to enable monitoring of the expansion of IWG activities. Results from this assessment are anticipated in early 2022.

It is also anticipated that in the future, data collected via certified freshwater farm plans will provide further insight on the extent of IWG being undertaken on an individual farm. This data will be an additional tool to enable Council's to monitor the extent of IWG in their region.

Proactive approach to wintering 2022

Towards the end of the 2021 winter crop grazing season the focus for many extension activities shifted to planning for the 2022 winter. It is critical that planning for the 2022 season is carried out as early as possible. Farmers have already begun establishing crops for next year's grazing.

The focus going forward is to ensure the continued uptake of the good management practice along with further increases in those farmers completing a plan or module for their IWG activities. The adoption of IWG modules will ensure good practice is being adopted and that there are appropriate wet weather event plans in place to reduce the risk of environmental effects.

Please refer to industry partners and the Regional Sectors submission as part of the recent consultation on IWG regulatory changes for further detail. Note that all parties who contributed to this report supported the further delay of the rules until 1 Nov 2022.

Primary industry sector events and activities

Primary sector organisations have responded to the expectations in the Minister's 16 March letter by increasing activity being undertaken to promote better IWG practices nationally. These activities are set out in the separate report included as Appendix 2. The key highlights of the activity undertaken include:

- Development of IWG modules from the primary sector, including the collaborative development and distribution of the IWG checklist to 76,000 properties.
- A fivefold increase in uptake of IWG modules by farmers with 1700 plans downloaded from primary sector organisations.
- A large extension and education effort with 112 events with IWG as a topic. Total attendance was over 3,000 participants, which is a 50% increase compared to either of the past 2 years.
- Continued implementation of an IWG hotline co-managed by industry and regional councils in southern parts of the country to act on IWG queries and complaints.

- Large digital information uptake with 15,000 & 18,000 IWG page views at Beef + Lamb and DairyNZ respectively. This is more than double the engagement from previous years.
- 80% of dairy farmers surveyed in Southland and South Otago have an IWG plan. This is an increase of 42% based on estimates from 2020.

Conclusions

The collaborative effort between Regional Council's and primary sector organisations has continued in this reporting period. Increased compliance and monitoring activity by Councils has shown that the majority of farmers are demonstrating good IWG practices. This is supported by the data provided by primary sector organisations which shows a strong uptake of IWG resources and good management practice information online.

Despite the large amount of good practice across the majority of farms it is accepted by all parties that there are still examples of poor practice that will result in adverse impacts on the environment. Alongside a continued focus on compliance and monitoring activity it is important to promote the early reporting on these farming operations and their practices. With limited resources available to monitor a large land area, reporting from other parties with an interest in IWG is another tool that will help Council's to identify laggards and ensure the appropriate action is taken.

As well as input from Regionals Council staff we would like to acknowledge the following groups for their contributions to this report:

- DairyNZ Ltd
- Beef + Lamb New Zealand Ltd
- Federated Farmers of New Zealand Inc.
- Deer Industry New Zealand
- Open Country Dairy Ltd
- Fonterra
- MPI

Appendix 1: Primary Sector Activity in 2021 in Intensive Winter Grazing

A combined summary report from DairyNZ, Beef + Lamb NZ, Deer Industry NZ, Federated Farmers NZ.



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Part 1: Summary of Intensive Winter Grazing Activity by Primary Sector Organisations

1. Introduction

Background

This appendix has been compiled by primary sector organisations for use in the intensive winter grazing (IWG) report scheduled for the 1st of November 2021 to Minister Parker and Minister O'Connor. Data has been supplied in good faith from these organisations to be used in this report, which is designed to highlight the significant efforts from the primary sector to improve winter grazing practice.

This report summarises the activity by primary sector organisations and farmers for winter 2021, with the data for 2021 ranging from 1 January to 30 September. The report is split into three parts. Part one is a summary of IWG activity across all primary sector organisations. Part 2 describes a survey that was undertaken by DairyNZ, investigating the uptake of IWG good management practices. Part 3 is a survey undertaken by the Pomahaka Water Care Group with farmers undertaking IWG.

Summary

Below is a summary of all activity for the 2021 winter season to from 1 January to 30 September 2021. Key achievements include:

- Development of IWG modules from the primary sector, including the collaborative development and distribution of the IWG checklist to 76,000 properties.
- A fivefold increase in uptake of IWG modules by farmers with 1,700 plans downloaded from primary sector organisations.
- A large extension and education effort with 112 events with IWG as a topic. Total attendance was over 3,000 participants, which is a 50% increase compared to either of the past 2 years.
- Continued implementation of an IWG hotline co-managed by industry and regional councils in southern parts of the country to act on IWG queries and complaints.
- Large digital information uptake with 15,000 & 18,000 IWG page views at Beef + Lamb and DairyNZ respectively. This is more than double the digital engagement from previous years.
- 80% of dairy farmers surveyed in Southland and South Otago have an IWG plan. This is an increase of 42% based on estimates from 2020.

2. Development of New Resources

Intensive Winter Grazing Module

In April 2021, an intensive winter grazing (IWG) module was developed by the Ministry for Primary Industries (MPI) and Ministry for the Environment (MfE). The module builds upon industry good practice documents and existing modules and was designed to help kick start IWG planning and provide a set of IWG practice expectations (figure 1). Since the release of the IWG module, the primary sector updated their IWG plans to reflect the content of the MPI/MfE module where needed.

This provides confidence to framers that they are receiving consistent information no matter the source.



Figure 1 – Winter grazing modules: From left to right: MPI and MfE’s IWG module, DairyNZ’s Winter Grazing Plan, and Beef + Lamb’s winter grazing resources

Wintering Checklist

Federated Farmers, Deer Industry New Zealand, DairyNZ, Beef + Lamb NZ and the Foundation for Arable Research, developed a winter grazing checklist to help support farmers to meet good management practice. The checklist was designed to help farmers with immediate decision making in early winter 2021 and focussed on an assessment of preparedness, highlighting any potential gaps that farmers might need to address.

A collaborative primary sector effort was undertaken to develop and distribute the IWG checklist, which went out to 76,600 properties, with a further 1,600 copies distributed directly through events and industry representatives on the road. The checklist was also available through multiple online platforms so it could be accessed directly.

The checklist is titled 'ARE YOU SET FOR WINTER?' and is designed to help farmers assess their winter preparations. It includes a 'What you do this winter matters to all farmers' section, a 'Use our easy checklist' section, and a 'Wintering Checklist' table. The table has four columns: 'Wintering Checklist', 'Green (You are all set)', 'Orange (You could be improved)', and 'Red (Not prepared, needs more preparation)'. The checklist items include: Stock are excluded from waterways, Critical source areas (CSAs) are protected, Grazing paddocks strategically, Plan the placement of supplementary feed and portable water troughs, Animal welfare requirements are critical, Measure feed to accurately assess quantity, and Plan and manage mobs to reduce the risk of lambing/calving on crop.

Wintering Checklist	Green (You are all set)	Orange (You could be improved)	Red (Not prepared, needs more preparation)
Stock are excluded from waterways. You have a minimum buffer of 5m (more is required for sloping ground).			
Critical source areas (CSAs) are protected: ideally keep stock off them for the whole winter period. If you have cropped CSAs, fence them off and graze them last during good weather after the rest of the crop has been fed. Leave a good buffer area at the lowest point to filter any sediment run-off.			
Grazing paddocks strategically: if adjacent to a waterway, graze towards the waterway. If on a slope graze downwards and in the direction of the water flow, or using a strategic plan suited to your location (such as an extra wide buffer).			
Plan the placement of supplementary feed and portable water troughs away from waterways, critical source areas, and ponding areas.			
Animal welfare requirements are critical: transition carefully, consider shelter, ability to lie down on firm ground, and access to water.			
Measure feed to accurately assess quantity, and plan daily feeding to ensure adequate feed for the whole winter (including extra feed for poor weather).			
Plan and manage mobs to reduce the risk of lambing/calving on crop.			
Develop an adverse weather plan for each winter grazing area to ensure that animal welfare and environmental protection needs will be met in poor weather.			
Make a plan to record evidence (photos, video, your farm diary) showing that good management practices are being implemented, and to use this year's learnings to inform next year's plan.			

3. Uptake of Intensive Winter Grazing Plans by Farmers

The increased effort by the primary sector in the development of winter grazing resources, web content, marketing, and extension was focussed on increasing good wintering practice. One of the mechanisms for farmers to record and communicate good practice has been with IWG modules discussed in the previous section.

There are two major indicators of increased uptake of IWG modules in 2021. The first is the number of downloaded modules from primary sector websites. In 2021, 1,700 copies of IWG plans were downloaded, which was a fivefold increase in downloads from previous years (Figure 2). This figure does not include IWG download information from MPI or MfE.

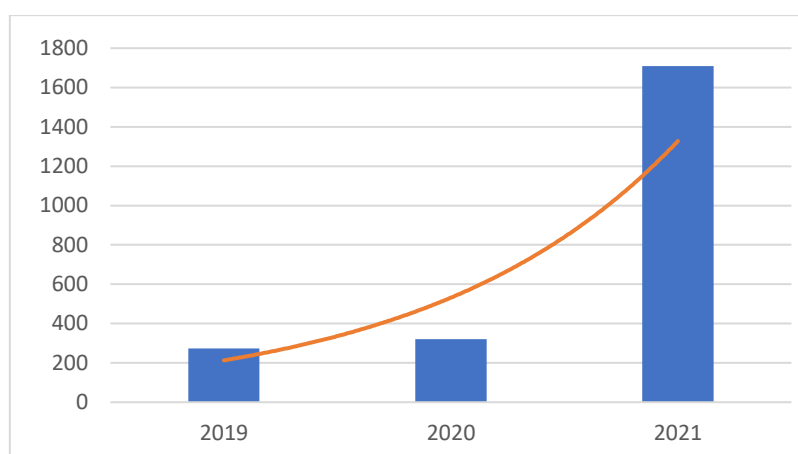


Figure 2 - Combined downloads for IWG plans (Beef + Lamb NZ: forage cropping templates, forage cropping chapter, paddock plan template and DairyNZ: Winter Grazing Plan, Winter Grazing Checklist and associated IWG PDFs). IWG plan downloads: 2019 = **274**; 2020 = **321**; 2021 (to 30 September) = **1,709**.

The second indicator of uptake of IWG planning is derived from a survey undertaken by DairyNZ of dairy farmers in Southland and South Otago. During June and July 2021, 150 surveys were completed by phone with 98 dairy farmers in Southland and 52 dairy farmers in South Otago.

In the survey, farmers were asked if they had a relevant wintering plan, which was described in the survey as either: a farm environment plan (FEP) or a DairyNZ winter grazing plan for 2021. 83% of respondents in Southland and 80% of respondents in south Otago had a relevant wintering plan. This figure had increased considerably from 38% in 2020 (Figure 3).

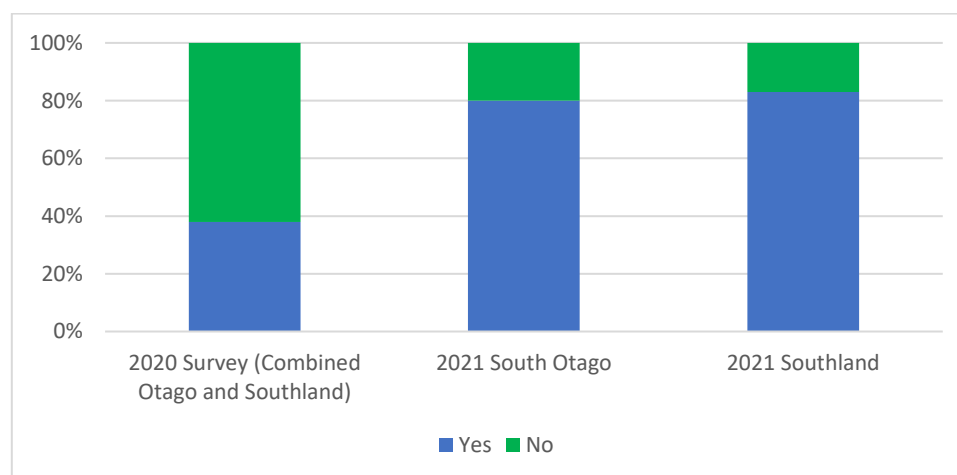


Figure 3 – Percentage of dairy farmers in South Otago and Southland that had a relevant wintering plan in 2021 compared to combined results from 2020. A relevant wintering plan is classed as a Farm Environment Plan (FEP) or a DairyNZ wintering plan (Source DairyNZ Southern Wintering Farmer Change Survey 2021. See part 2 of this appendix).

4. Winter Grazing Events and Extension

Primary sector organisations have undertaken dozens of events focused on IWG. Beef + Lamb NZ and DairyNZ events alone reached 79 in 2020 and even under Covid- 19 restrictions, and the primary sector has collectively already undertaken 112 events that include IWG topics so far in 2021 (Figure 4).

Often extension events are collaborative and include regional councils, multiple primary sector organisations (e.g., Federated farmers, Deer Industry NZ, DairyNZ and Beef + Lamb NZ), and can include collaborative efforts with not-for-profit groups like Thriving Southland.

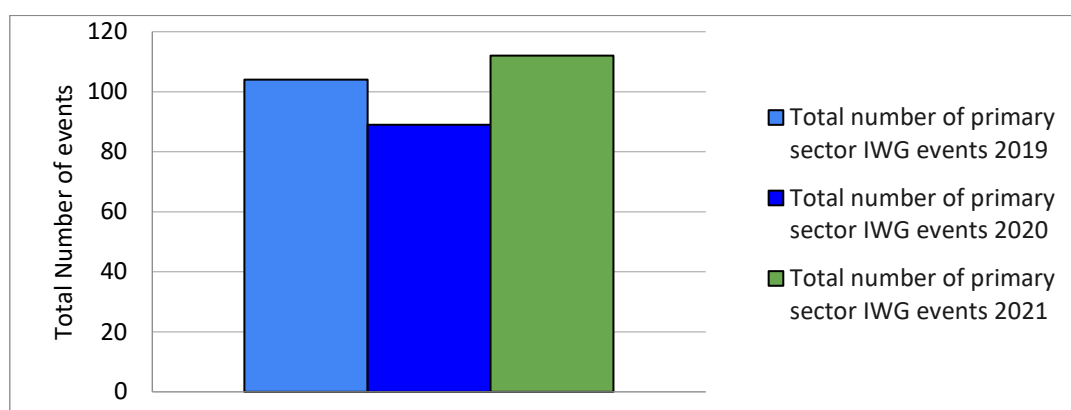
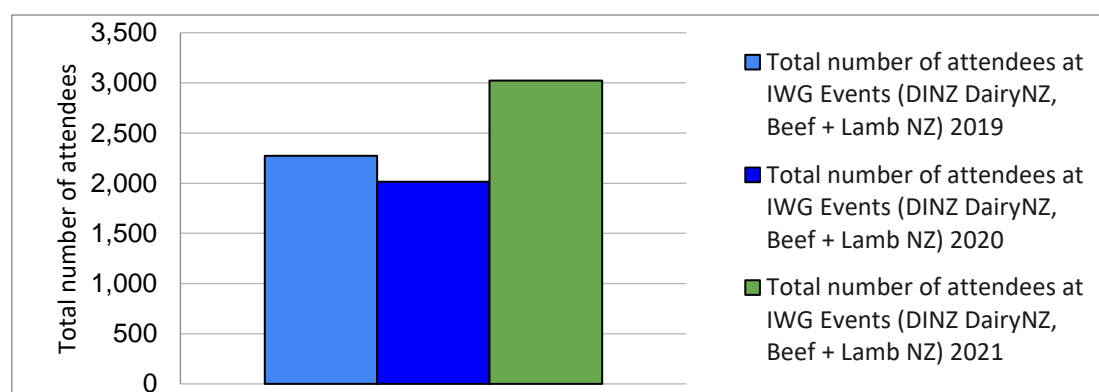


Figure 4 - Total number of intensive winter grazing events hosted by DairyNZ or Beef + Lamb NZ. Note that the current season (green column) is reporting on partial completion of the current season (1 Jan -30 September). Event totals: 2019 season = 104; 2020 = 89; 2021 = 112¹.

The total number of farmers attending events is measured in the thousands, with 2,273 attending IWG events in 2019, 2,015 attending in 2020 and from January to 30 September 2021 – 3,024 attendees have already attended IWG events² (Figure 5).



² Data for event attendees and number of events has been updated from the last report (1st August 2021) for 2019 and 2020. Previous data was inaccurate in the last report. The most accurate figures available are now presented in this document.

Figure 5 - Total number of attendees at Intensive Winter Grazing Events hosted by DairyNZ or Beef + Lamb NZ. Note that the current season (green column) is reporting on partial completion of the current season (1 Jan -30 September). Attendee totals: 2019 = 2,273; 2020 = 2,015; 2021 = 3,024¹.

5. Engagement with Digital Information

Both DairyNZ and Beef + Lamb NZ websites contain many IWG resources, tools and webpages for farmers interested in winter grazing. The below figure (Figure 6) summarises the activity on both DairyNZ and Beef + Lamb NZ websites over the last three years.

There has been a marked increase in traffic to Beef + Lamb NZ's IWG web content, with three times as much traffic to winter grazing pages compared to previous years. DairyNZ's website traffic has also been high and has doubled between 2020 and 2021 (Figure 6).

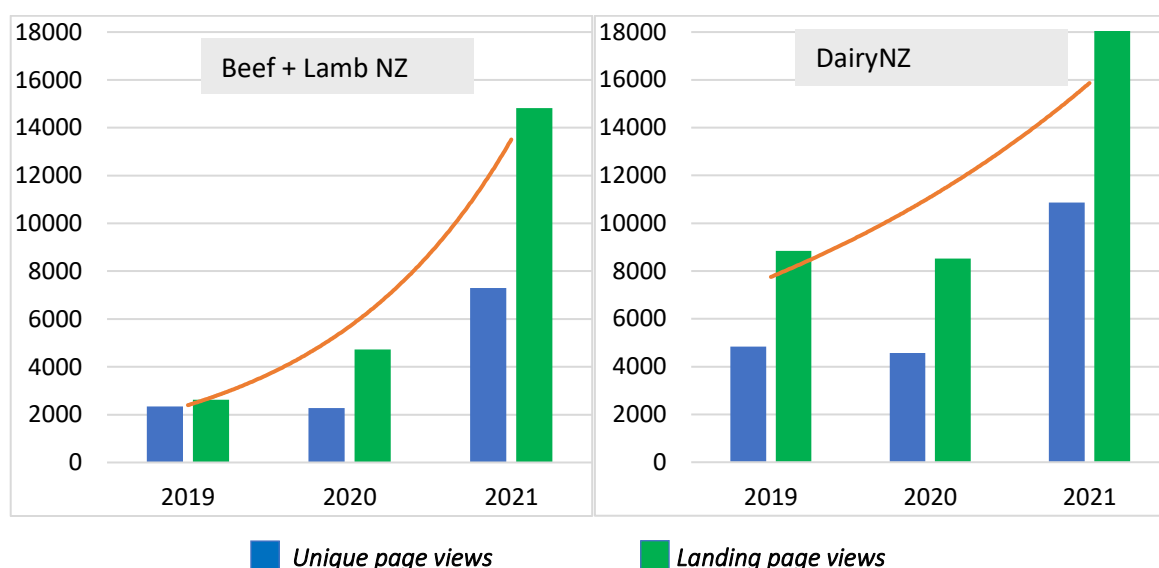


Figure 6 - IWG web page traffic (unique user views and landing page views) for both Beef + Lamb NZ (left) and DairyNZ (right). Data is expressed in calendar years (1 January to 31 December). 2021 date range is from 1 January to 30 September).

6. Winter Grazing Hotline

A hotline (0800 FARMING) was set up prior to winter 2021. This line, which is supported by industry and councils, was provided as an opportunity for the community to give feedback on the IWG practices that they see.

The same hotline was also used in 2020, but following feedback, significant additional promotion was carried out for the 2021 season to ensure that more people were aware of this avenue to report concerns. This included radio campaigns via NZME and Media Works in Southland and South Otago, radio interviews on farming and breakfast radio shows and information included in newspaper articles and opinion pieces whenever possible.

From reinstatement of the IWG hotline in April 2021 until 30 September 2021, 19 cases were opened.

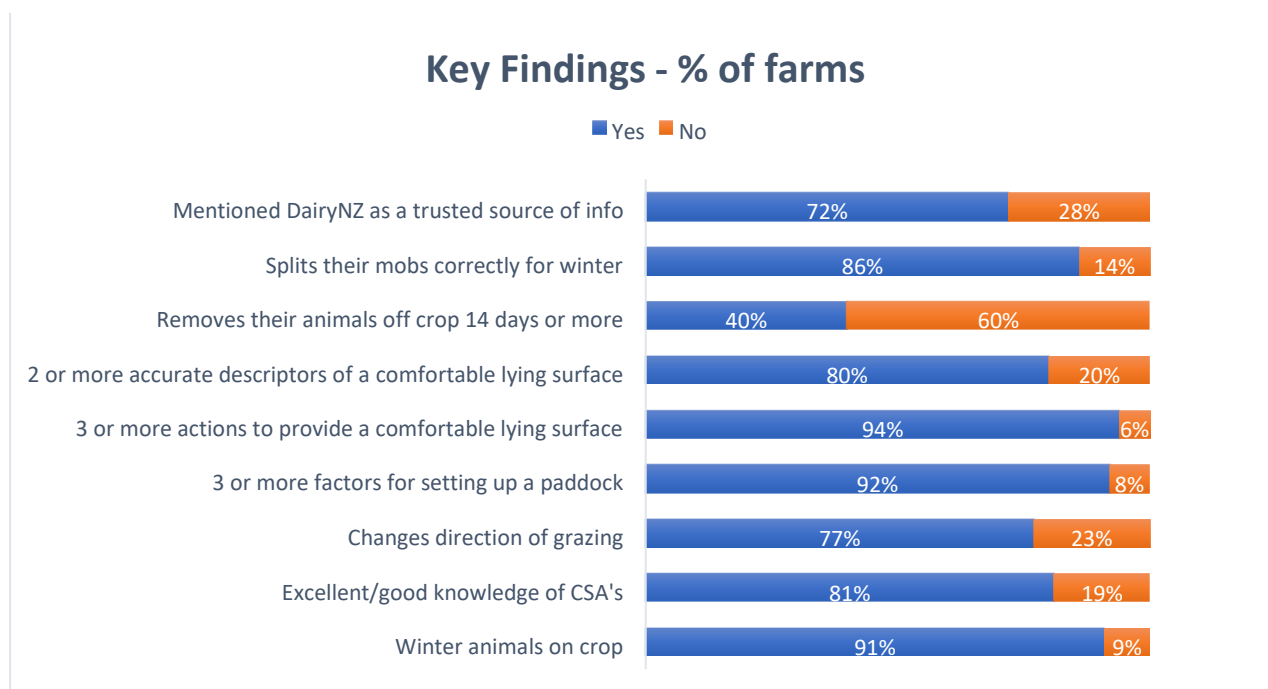
Part 2: DairyNZ's Southern Wintering Farmer Change Survey 2021

1. Executive Summary

In Southern New Zealand, most dairy cattle are wintered on crop. This practice has been under increasing scrutiny, resulting in the development of regulations and good management practices (GMP or WGMP) for wintering.

DairyNZ's Southern Wintering Farmer Change project has been established to support widespread adoption of GMP in Southland and South Otago. As a starting point, a phone survey was conducted with 133 randomised farmers in Southland and South Otago during winter 2020 to measure current understanding and implementation of GMP. After completing a gap analysis, it became evident that improving adoption of four key GMP's in Southland, as well as overall GMP uptake in South Otago should be the focus for the project in 2021.

The phone survey was repeated during the winter of 2021. It was conducted with 150 randomised farms in Southland and South Otago.



2. Background

Wintering on crop is a common method of providing grazing stock with ample feed in Southern New Zealand. However, in the last few years wintering practices have faced increased scrutiny and farmers and the councils that regulate winter grazing are being asked to improve what they do to protect the land and the grazing stock.

Recent Action for Healthy Waterways and National Environment Standards announcements have placed further pressure on the practice of wintering on crop and the variable uptake of good management practices (GMPs) that minimises losses to waterways.

There is a need to support farmers to make change on farm to meet good environmental and animal care wintering practices. DairyNZ's Southern Wintering Farmer Change project will assist farmers in Southland and South Otago to meet good environmental and animal care practices for wintering. This will be achieved through a whole supply chain approach utilising behaviour change methodologies and building on the work of previous projects including the Southern Wintering Project (2019- 2020).

DairyNZ's Southern Wintering Farmer Change project refers to wintering good management practice (GMP) as:

1. Protect critical source areas (CSA's) and waterways from soil damage and overland flow by using appropriate buffer zones for grazing and cultivation
2. Utilise back fencing and portable troughs to limit excessive movement of animals and damage to soils
3. Use strategic grazing for winter crop to limit soil damage and overland flows to CSA's.
4. Create a plan for winter grazing to achieve the above three points.
5. A contingency for shelter/feeding of cows when adverse weather arrives and the ability to readily move animals to shelter/dry land in adverse weather before harm occurs
6. Avoid giving birth in mud
7. Prevent deaths in adverse weather events
8. Prevent mass mortality event on winter grazing systems
9. Always provide animals with a comfortable surface to lie
10. Always provide an adequately balanced diet, including appropriate supplementary feeding for animals on fodder beet and other crops

During the winter of 2020, a baseline survey was completed to determine the current uptake of wintering GMPs and include animal welfare GMP. Data collected was used to guide future activities targeting on-farm implementation of GMP and provide insights from the intended audience. Previous work and current understanding contributed to the decision to focus on these five key focus areas for the project in 2021.

- Managing CSA's
- Choosing the correct grazing direction
- Providing a comfortable lying surface for animals
- Not calving on crop/mud
- Increased adoption of GMP in Otago

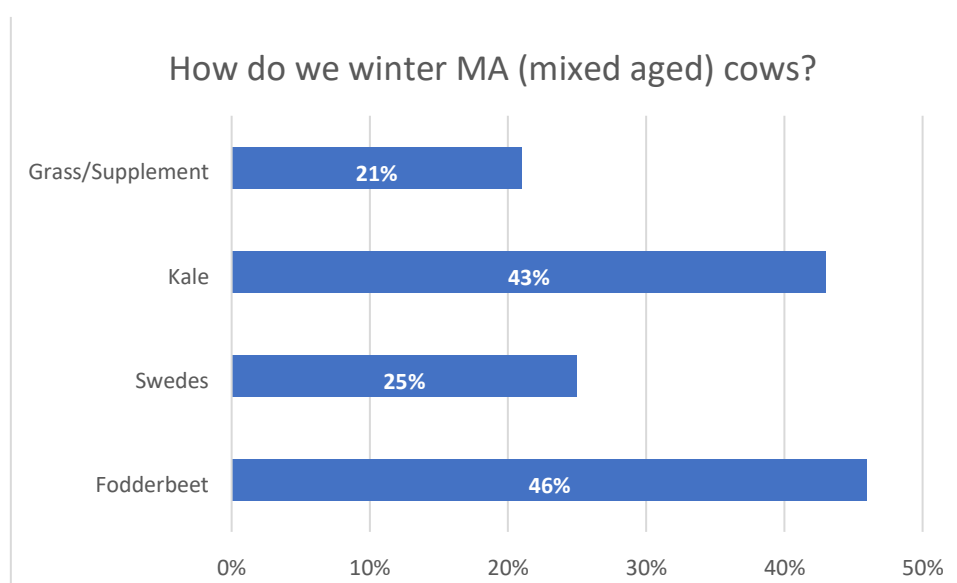
3. 2021 Survey

150 surveys were completed by phone with farmers in Southland (98) and South Otago (52) between 1st June and 31st of July 2021. Farmers were asked open questions and encouraged to talk about their own experiences. Responses to a selection of questions which were free text can be found in appendix 1. Each survey represented one respondent talking about one farming business, this could have meant multiple Dairy supply numbers/accounts in some instances.

4. Farm Data Results

71% of farms wintered their animals at a run-off or support block, 52% of farms wintered on the platform and 30% wintered with an external grazer not connected to the milking operation. 2021 showed an increase in the number of farms wintering at support blocks and a decrease in the number of animals wintered with a grazer. Farms often wintered animals at more than one location at a time.

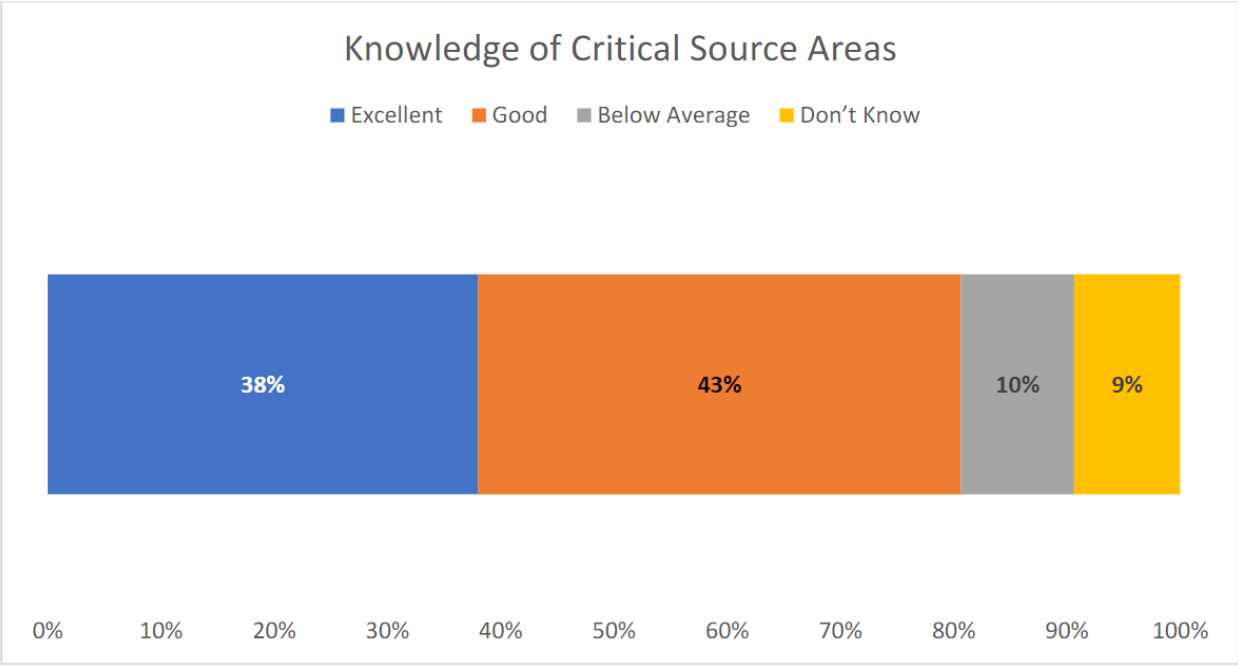
91% of farms wintered animals on crop which is similar to winter 2020 where 89% of animals were wintered on crop. R1's are predominantly wintered on a grass and supplement system (45%) followed by Kale (29%). R2's are predominantly wintered on Kale (39%) followed by a grass and supplement system (24%). Mixed Aged (MA) cows are predominantly wintered on Fodder beet (46%, compared to 40% in 2020) followed by Kale (43%, compared to 48% in 2020).



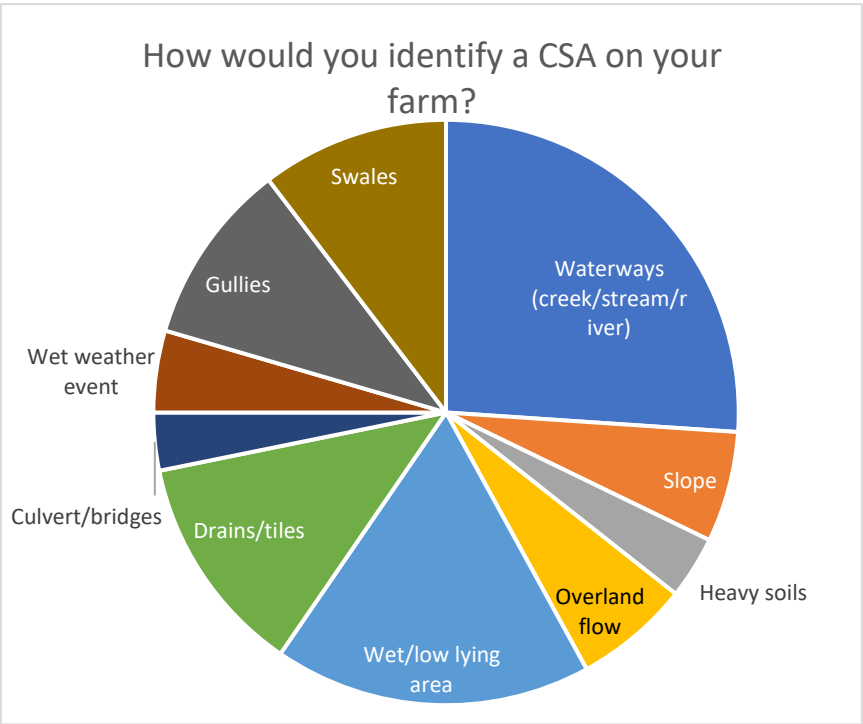
Most farms were able to name their specific soil type (44%) or describe it (53%), however 3% said they didn't know or were not sure. This is an improvement from the 2020 survey where 17% said they didn't know or were not sure.

Protecting critical source areas and waterways from soil damage and overland flow by using appropriate buffer zones for grazing and cultivation

81% of farms could confidently describe a critical source area (CSA) on their own farm (with either excellent or good knowledge). 10% were aware of critical source areas on their farm but had limited knowledge. 9% of farms didn't know or could not answer. This is an improvement from the 2020 survey where 59% of farms could confidently describe a critical source area on their farm.



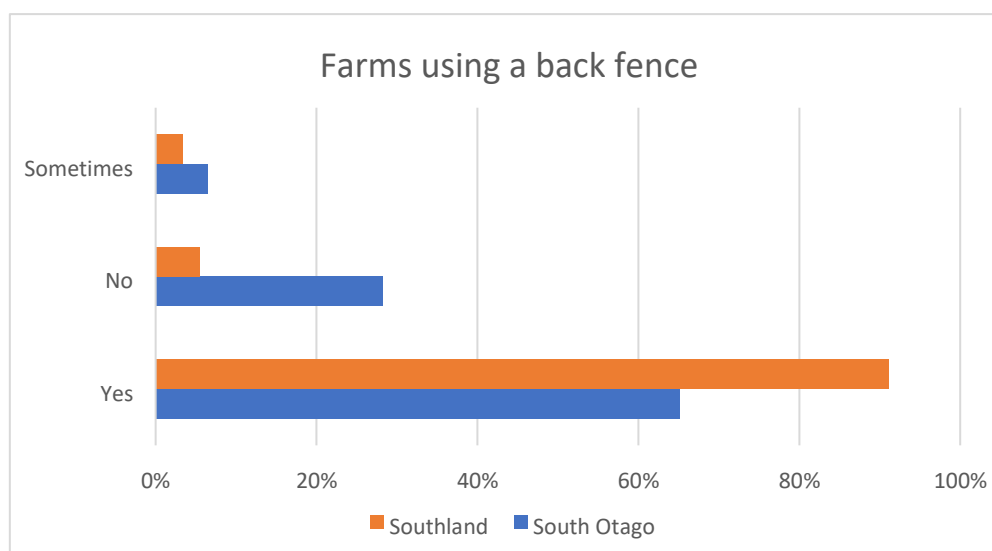
Farms most commonly identified a critical source area as a waterway (72%), followed by wet/low lying areas (49%), drains and tiles (34%), gullies (29%) and swales (29%).



76% of farms could name two or more CSA management strategies, an increase from 69% in 2020. The most common strategy used was to fence off and not graze the CSA (56%), followed by using a grass buffer (54%) and leaving the CSA uncultivated (49%).

Utilise back fencing and portable troughs to limit excessive movement of animals and damage to soils

Overall, 82% of farms were using a back fence during winter grazing. In Southland this was stronger with 91% using a back fence compared with 65% in Otago. This is a small increase (10%) in Otago compared to 2020. Farms most commonly like to move their back fence every 2-3 days.



The most common benefit described by farms for using a back fence was to limit soil damage (60%) followed by reducing pugging/mud (58%), reduced walking for cows (54%), to keep out of wet areas (24%) and to provide dry ground for lying (22%).

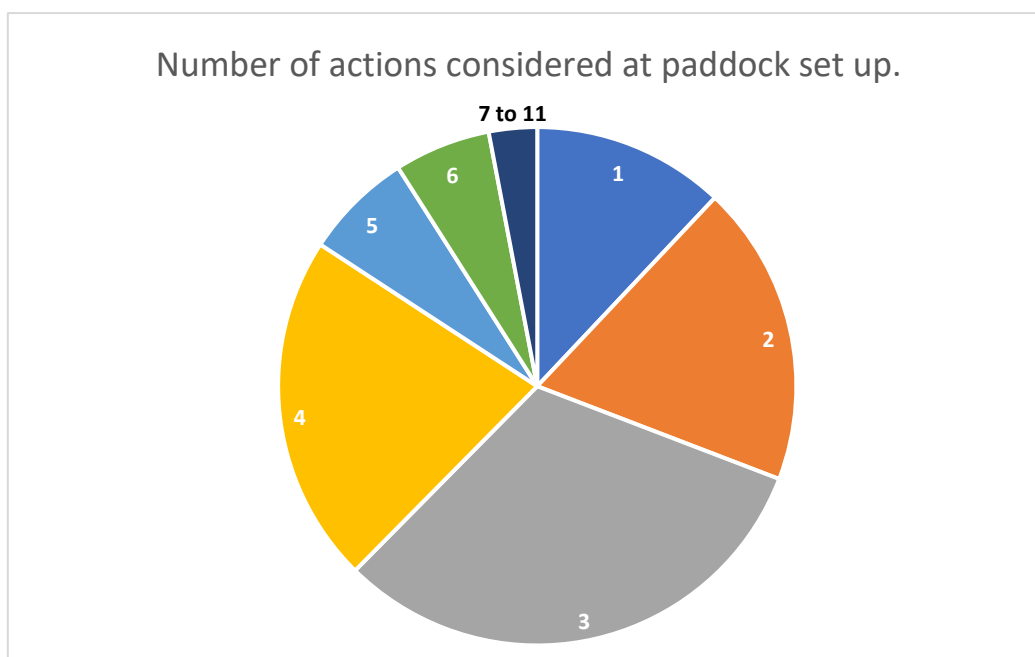
77% of farms were using a portable trough during winter grazing. This is more common in Southland with 77% compared to South Otago with 58%. These numbers are very similar to 2020.

Use strategic grazing for winter crop to limit soil damage and overland flows to CSA's.

When grazing the winter crop, farms most commonly graze the paddock by starting in the middle and working outwards (35%), followed by grazing from the top of the slope (29%), and feeding the longest face (28%). 5% of farms said they grazed the paddock from the bottom up. This is an improvement on good management practice compared to 2020 when 11% of farms were grazing from the bottom upwards. Farms often used multiple grazing strategies within one paddock.

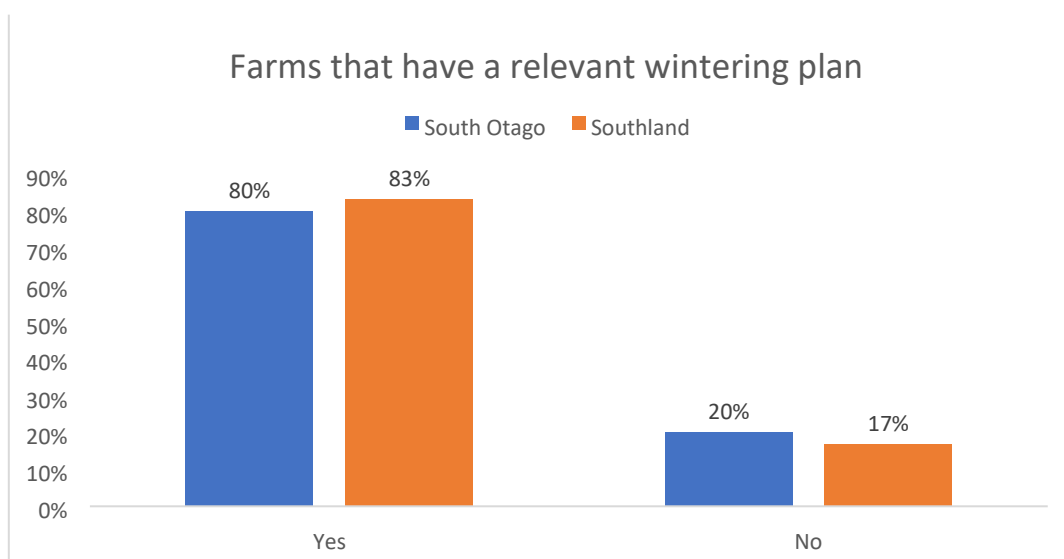
77% of farms said they changed the direction of grazing within a paddock and the most common reason for this was because of deteriorating weather or ground conditions (54%), followed by approaching a CSA (46%). Farms in Southland (82%) changed direction within the paddock more often than Otago (68%).

93% of farms considered three factors when setting up a winter grazing paddock. This is an improvement from 2020 where on average farms only considered two factors. The most common factor considered when setting up a paddock was the grazing direction (53%, up from 21% in 2020) followed by where the CSA's were in the paddock (41%, down from 58% in 2020) and where the shelter was in the paddock (35% up from 11% in 2020).



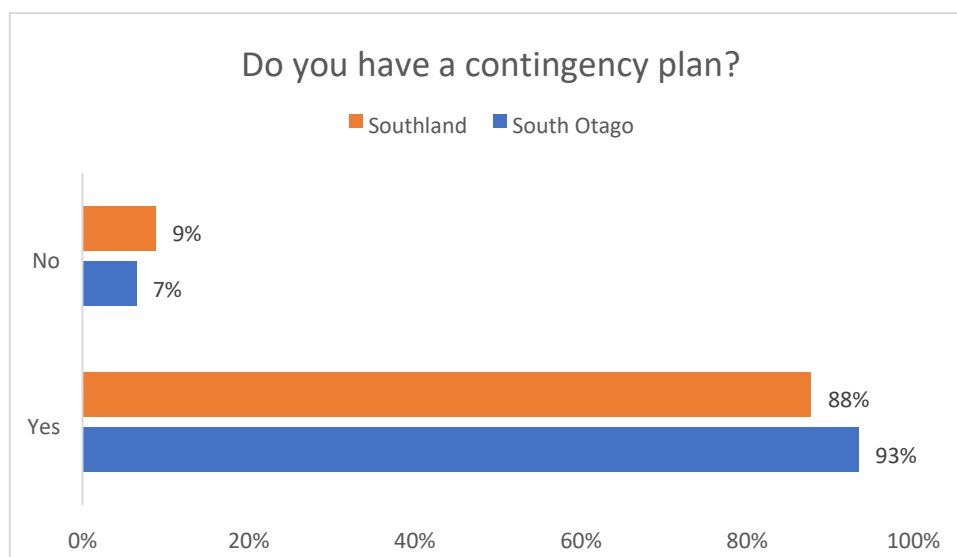
Create a plan for winter grazing to achieve the above three points.

82% of farms surveyed had a relevant wintering plan (FEP or a DairyNZ Winter grazing plan) for 2021. 80% of Otago farms had a relevant wintering plan this year compared to 38% in 2020.



A contingency for shelter/feeding of cows when adverse weather arrives and the ability to readily move animals to shelter/dry land in adverse weather before harm occurs

89% of farms said they had a contingency plan for winter 2021. This is slightly stronger in South Otago with 93% compared to 88% in Southland. The most common factor that influenced whether farms implemented their plan B was weather conditions (72%) followed by paddock or soil conditions (46%).



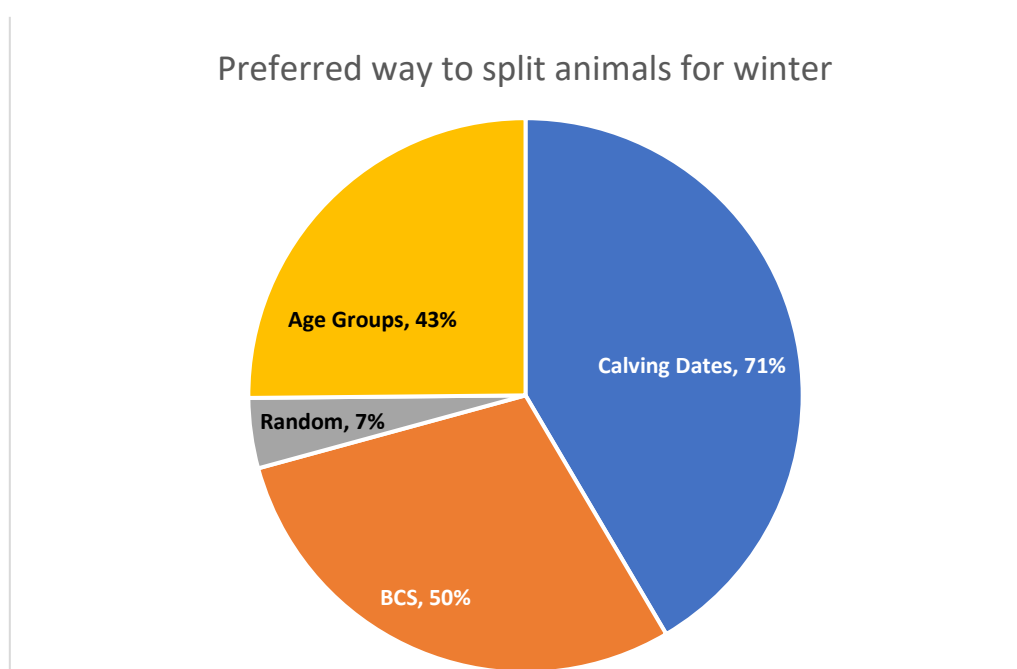
35% of farms said they had removed animals from crop paddocks in the last 2 years. The two most common reasons for removing animals from crop were prolonged wet weather (18%) and encountering an adverse event (18%).

73% of farms said they have made changes to their wintering system after facing an adverse weather event which is an increase from 48% in 2020.

Avoid giving birth on mud.

Farms preferred to split their wintering mobs by calving date (71%, up from 40% in 2020), followed by body condition score (50%, up from 34% in 2020).

Farms often split their mobs considering one or more factor. 50% of farms redrafted their animals during the winter of 2021, with the most common reason being to draft into calving date mobs.



61% of farms that winter animals on the platform remove their animals 14 days or more before calving. 75% of farms that winter their animals at a runoff or support block remove their animals 14 days or more before calving. This is an improvement from 2020, where it was more common to remove animals 7 days before calving.

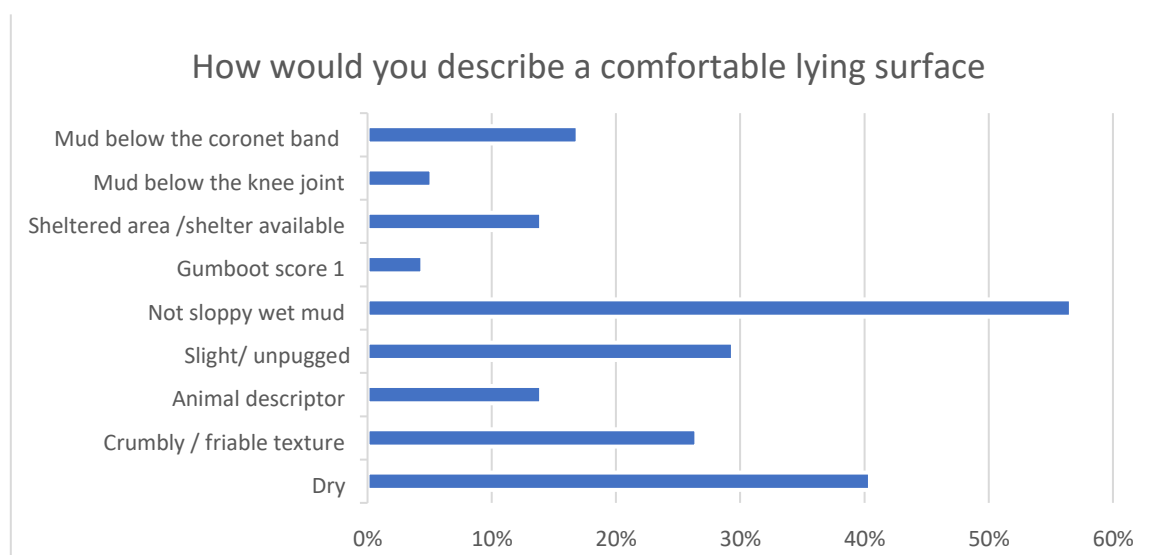
63% of farms manage their 'springers' on grass breaks/paddocks, followed by calving pads (40%).

4% of farms that fed fodderbeet only used signs of 'springing up' to remove cows from crop. This is an improvement from 2020, where 14% of farms feeding fodderbeet were using 'springing up' as their only factor to remove animals from crop.

Farms were asked how they managed the dam and her calf if/when she calved on crop or away from the platform, rather than if they had experienced cows calving on crop.

Always provide animals with a comfortable surface to lie

When describing a comfortable lying surface, the most common answer was 'not sloppy wet mud' (57%), followed by 'dry' (40%). 40% of farms mentioned 4 accurate descriptors to describe a comfortable lying surface. 49% of farms mentioned 3 accurate descriptors. 2021 saw a broader range of answers compared with 2020. 14% of farms specifically mentioned an animal behavioural descriptor.



The most common way to assist animals with a comfortable lying surface was to use the back fence (57%), followed by using the main front fence (could be shifted more often or larger breaks, 55%) and paddock selection that would allow better areas for lying (38%).

73% of farms said they had completed an action this winter to provide their animals with a comfortable lying surface. This is an increase from 60% in 2020.

Always provide an adequately balanced diet, including appropriate supplementary feeding for animals on fodder beet and other crops and Prevent mass mortality event on winter grazing systems

68% of farms fed their cows (move the front crop fence) once a day. 69% of farms said that they increased the number of times animals were fed. This was most commonly due to an adverse weather event (40%) or prolonged wet weather (40%).

76% of farms fed their animals minerals during winter. The most common supplement to feed with crop is baleage (93%).

8% of farms feeding fodderbeet are feeding it over the recommended ratio (70:30). 1% of farms feeding Kale are feeding it over the recommended ratio (80:20).

Trusted Advisors

Farms were asked who their preferred source of information/communication/support and expert advice was. DairyNZ continues to be the most trusted source of wintering information with 72% of farms mentioning DairyNZ.

Confidence in winter grazing systems was relatively high with 98% of farms saying they would be happy for anyone to come to their farm and see their wintering system. This is an increase from 2020, where 89% of farms were happy for anyone to visit their farm.

63% of farms said they follow other farmers on social media. This is an increase from 46% in 2020.

36% of farms said they are always changing something about their winter grazing system. 20% of farms said they are trying something new this winter.

45% of farms said they had selected their paddocks for winter 2022 already.

5. Conclusions

It is proposed that each year the survey is repeated to track progress. Surveying farms during winter provides greater confidence that the responses collected are valid. It is what farmers are doing not what they hope to do or recollect what they did.

The Southern Wintering Farmer Change project highlighted four focus areas for winter 2021 that required a behaviour change lens.

- Managing CSA's
- Choosing the correct grazing direction
- Providing a comfortable lying surface for animals
- Not calving on crop/mud

Managing CSA's

Our key recommendation from the 2020 survey were: **Farmers need to increase their confidence in identifying a CSA on their own farm, the starting point of WGMP.**

The 2021 survey results show that there was an increase in confidence describing CSAs -- from 59% in 2020 to 89% in 2021.

Choosing the correct grazing direction

Our key recommendation from the 2020 survey was: **Farmers need to shift to informed decision making (based on paddock characteristics e.g. CSA's) when choosing grazing direction.** There has been a reduction in the number of farms grazing the paddock incorrectly from the bottom up -- 11% in 2020 to 5% in 2021.

In 2021, 93% of farms considered three factors when setting up a winter grazing paddock. This is an improvement from 2020, when on average farms only considered 2 factors. The most common factor farms considered for paddock set-up was the grazing direction (53%, up from 21% in 2020) followed by where the CSA's were in the paddock (41%, down from 58% in 2020) and where the shelter was in the paddock (35% up from 11% in 2020).

Providing a comfortable lying surface

Our key recommendation from the 2020 survey was: **Improved confidence in knowing what is comfortable for a cow.**

In 2020, the majority of farm (56%) mentioned only one accurate descriptor of a comfortable lying surface. In 2021, 40% of farms mentioned four accurate descriptors for a comfortable lying surface. 2021 saw a broader range of answers compared with 2020. 14% of farms specifically mentioned an animal behavioural descriptor.

In 2020, 60% of farms assisted their cows with a comfortable lying surface during winter. The most common way to do this was by utilising their back fence. In 2021, 73% of farms assisted their cows with a comfortable lying surface. The most common way to do this was strategic use of their back fence.

Not calving on crop/mud

Our key recommendation from the 2020 survey was: **Relying on visual identification that cows are due to calve is a risk. Farms need to be better planned and proactive around removing animals early.**

In 2020, 14% of farms who fed fodder beet to mixed aged cows used 'springing up' of the udder as the only prompt to take the cows off crop. In 2021, there were a reduced number of farms (4%) using springing up as the only prompt to remove cows from fodder beet.

61% of farms wintering animals on crop, on the platform, remove their animals 14 days or more before calving. 75% of farms that winter their animals on crop, at a runoff or support block, remove animals 14 days or more before calving. This is an increase from 2020 where it was more common to remove animals 7 days before calving

6. Next Steps

Going forward the project proposes to focus on 3 new focus areas, along with a current focus area.

1. Contingency Planning – Most farmers have a contingency plan (plan B), however it may only be sufficient for 1-2 days of wet weather. Plans need to be more robust to endure the total length of winter. If this isn't achievable for a farm then they may need a new solution.

2. Strategic Grazing. – Was a focus for 2021. Improvement has been made, however we focused on one element of strategic grazing. Going forward it would be beneficial to break down the elements of strategic grazing and focus on the specific actions that we would like farms to do.
3. Other regions that winter animals on crop – This is unknown quantity and quality of winter grazing practices.
4. Planning ahead for wintering grazing in 2-3 years. – If winter grazing is becoming difficult to perform for some farmers, what are their options for the future.

Broadening the project to include other areas that winter animals on crop will give crucial insight on how farms, as a whole, are performing whilst wintering animals on crop.

We asked: In your district/community, what would you like to see more/less of during winter?

“This year has been way better than other years”

“Everyone looks to be doing awesome”

“Pretty happy with the way the area is moving forward”

“More reasons for farmers to get together over winter”

“Less roadside crop paddocks. I would have liked our grazer to use back fences and portable troughs on his farm”

“Generally everyone has picked up their game. The new rules will hopefully pull the bottom end up into line”

“Things look better... but is that because paddocks are not by the road? I think people have chosen their paddocks better”

“More forward thinking. If you see the weathers going to turn to crap, do what you can to get your cows in less muddy areas”

“Better paddock selection and back fences not so tight up on cows”

We asked: Do you have any tips or tricks that you would like to share?

“Use the resources and people available. Utilise the chance to be educated now before it becomes enforcement later.”

“Use bigger fresh breaks”

“Have a regular meeting halfway through winter around the paddock outcomes you want. Ask how proud we are of what we are doing”

“Plan early and have contingencies”

“Having baleage all set out and spares too for adverse weather”

“Taking baleage wrap off once a week instead of every day so that it can then be a one-person job. Waratah portable troughs in and make sure you have the right

size trough for mob size. We use garden hose fittings as water pressure is low and it's much easier to take on and off and shift than heavy alkathene."

"Don't shut the door on help, take advice when given."

We asked: Do you have any advice on how we (DairyNZ) can help other farmers achieve better winter grazing outcomes?

"Get some more info out there for the farmers that are struggling, we have a lot of council changes going on in Otago so farmers will need help with it."

"Think DNZ are doing a great job, been to workshops in the past and they are great"

"More wintering events, attended one and it was really good"

"DairyNZ events have been really good but maybe earlier if possible if there's new rules/regs so there's a chance to familiarise with them."

"Keep doing what you're doing. Love ideas and solutions not dwelling on problems"

"Try to get some recycling options for silage wrap in Otago. Push the grazing plans. Get contractors on board as these are the people who ultimately cultivate the areas so making sure they understand what areas to spray out and what CSAs to work around."

"Keep putting the information out there."

"I'm a new farm manager to this farm and it's been good to talk to other farmers so encourage this"

"Just keeping talking about it. Encourage farmers to help each other and make information dynamic and interesting to encourage uptake."

Part 3: Pomahaka Water Care Group: Winter Grazing Survey Summary Report

1. Introduction

The Pomahaka Water Care Group based in South West Otago, is a farmer-led catchment group working to improve water quality in the Pomahaka River. The Water Care Group was formed by local farmers in 2014 and focusses on improving water quality by promoting the adoption of good management practices

and mitigation options. The Group has promoted the good wintering management practices such as water protection, strategic grazing, and critical source area management. To assess how catchment farmers were adopting good winter management practices, the Group undertook two winter grazing surveys in 2019 and 2021.

The 2019 survey was a post winter grazing survey, while the 2021 survey was a pre-winter grazing survey, with the 2019 survey reflecting on how the winter grazing had gone, while 2021 looked at the plans that were in place for the upcoming winter. This report presents an overview of the data captured through these two surveys. Results have been grouped for ease of comparison.

2. Planning

Participants were asked about how they had planned for their winter crops. In 2021 100% of participants said their paddocks were suitable for winter forage crops, compared to 92% in 2019. Seventy five percent of participants said their paddocks were under 15° in 2021, compared to 66% in 2019. While 84% have prepared a winter grazing strategy, an additional question asked in 2021.

There has been an improvement in planning as can be seen from Figure 1, with a marked increase in Pomahaka farmers who had prepared a paddock plan before cultivation in 2021 (71%) compared to just 14% in 2019. More farmers have left critical sources areas uncultivated and in grass up from 67% in 2019 to 94% in 2021. Improvements in the use of riparian buffer zones of five metres or more have increased from 56% in 2019 to 89% in 2021. There were also significant increases in the use of sediment mitigation measures (only 19% in 2019 compared to 70% in 2021).



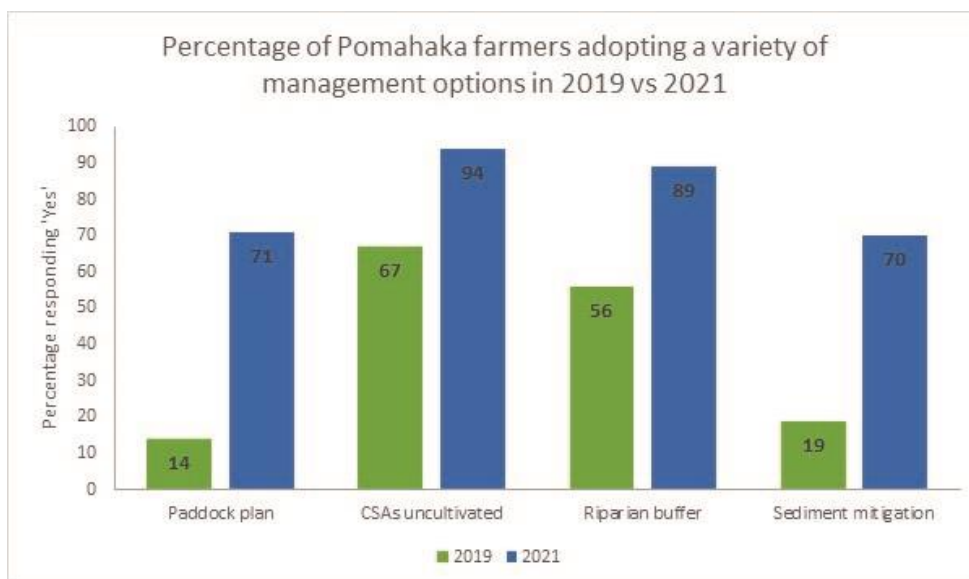


Figure 1: Comparison between 2019 and 2021 of participants who answered 'Yes' to various planning and management questions.

3. Good Management Practices and Mitigations

Adoption of good management practices increased dramatically between the two surveys, as can be seen from Figure 2. The use of strategic grazing was high in 2019 at 78% but even higher in 2021 at 93%. There were also increases in the use of back fences (41% in 2019 compared to 57% in 2021) and a similar increase from 73% of participants indicating they intended to use portable water troughs in 2021 compared to 51% in 2019, and the use of a catch crops (20% in 2019 and 67% in 2021).

Encouragingly, 91% of all participants had a contingency plan in cases of adverse weather for the upcoming winter, a question that was not asked in the 2019 survey. Contingency plans help farmers prepare for significant adverse weather events such as heavy rainfall or snowstorms. They help farmers reduce the risks to the environment and manage animal welfare needs.

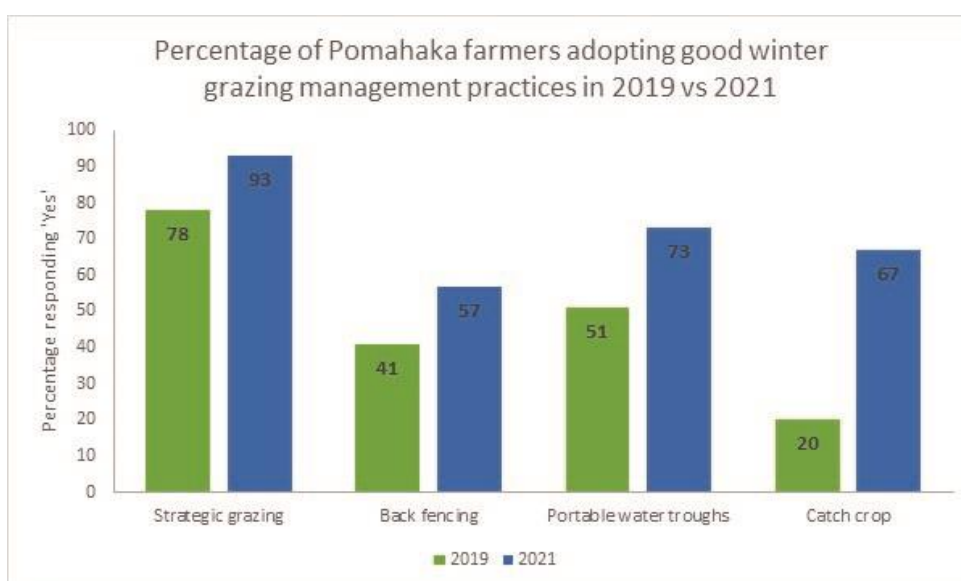


Figure 2: Comparison between 2019 and 2021 of participants who answered 'Yes' to various good management questions.

4. Assessing Change

In 2019 participants were asked whether would change their winter grazing practices for the next year, while the 2021 survey asked whether they have changed their approach to winter grazing over the past three years. Importantly, as Figure 3 illustrates, in 2021 87% of respondents said that they have changed their winter grazing practice in the past three years, while in 2019 only 53% were planning on changing their approach to winter grazing.



Figure 3: Change in winter grazing practices between 2019 and 2021.

There appears to have been a clear change in management practices recorded between 2019 and 2021 as illustrated by this survey. The work of the Pomahaka Water Care Group has been enabled through the Pomahaka Catchment Project, funded by the Sustainable Farming Fund, which has allowed the Group to promote the adoption of good winter management practices, and has been helpful in providing support to landowners operating in the Pomahaka catchment. The overall trend and results from this survey are very encouraging and add validation that a catchment group approach has helped to encourage farmers to adopt good management practices.

The Pomahaka Water care Group is supported by:



Appendix 2: Regional Council compliance monitoring and enforcement

Table 1 - Reactive monitoring based on IWG complaints, incidents and enforcement

	Number of IWG complaints	Incidents linked to IWG	Water quality issues linked to IWG	Enforcement action taken	Comment
Auckland	0	0	0	0	
Environment Canterbury	2	2	0	0	Enforcement action not required due to no environmental impact. Education provided.
Greater Wellington	0	0	0	0	
Hawkes Bay	1	1	0	0	Officers undertook a site visit. The farmer had a plan using the IWG Module and minor improvements were recommended.
Horizons	1	0	0	0	Officers undertook an inspection it was established the complaint did not relate to an IWG activity.
Marlborough	0	0	0	0	
Nelson	0	0	0	0	
Northland	0	0	0	0	
Otago	3	3	0	2 infringement notices	Site visits were undertaken in response to complaints, two sites no breach identified and education provided. One site resulted in

				1 abatement notice	enforcement notices issued for pugging in a waterway from winter grazing adjacent to streams.
Environment Southland	7	5	0	0	
Taranaki	0	0	0	0	
Tasman	1	0	0	1 formal warning	
Waikato	1	0	0	0	Discussion with farmer, education and advice given regarding the reported incident.
West Coast	0	0	0	0	One infringement and abatement notice issued after flyover checking on IWG areas located an unconsented discharge of effluent from a herd home storage pond.

Table 2 – Proactive IWG compliance monitoring activities

	Number of flyovers	Satellite imagery	IWG site visits or audits	Advice and education	Comment
Auckland	0	0	0	0	IWG is not a prevalent issue in Auckland. Generic information will be included in letters to dairy farmers to advise them of the requirements.
Environment Canterbury	0	Whole region Technology still under development	21 site visits (2 compliance visits and 19 audits)	500 – these were in regard to meeting our regional rules not directly about IWG	1,150 properties have individual land use consents that get audited. A further 1500 properties are audited under the irrigation schemes consents.

	Number of flyovers	Satellite imagery	IWG site visits or audits	Advice and education	Comment
		and trial for indicative areas			ECAN had not included a required IWG component into the audit tool until 2021/22. From 2021/22 onward IWG will be assessed as part of the FEP Audit.
Greater Wellington	0	0	0	0	The approach we are taking this year is to start the conversation with farmers about IWG. Our intention is to look at IWG paddocks that have been utilised this year with farmers, provide advice on GMP and to encourage everyone to complete the MPI module. We will be doing this as compliance officers as well as through our Land Management team.
Hawkes Bay	0 (The planned flight did not go ahead due to poor weather and Covid Alert Level restrictions)	Region wide analysis of crops, slope and proximity to waterways 2018 imagery and April 2021 imagery	1	HBRC updating website to reflect end of grazing period, to focus on crop planning and paddock selection for next winters crop	There is significant credit for the field days run around the region in the autumn for improving IWG practice. A very dry winter in Hawkes Bay created favourable conditions for wintering in terms of minimising pugging and surface runoff flow in most areas. Wintering was largely completed by the time significant spring season rainfall occurred. Fewer than normal issues were discovered at a time of heightened public awareness.
Horizons	1 (114 sites targeted for inspection)	Rangitikei area	22	Advice in relation to IWG was contained in the inspection reports	Generally compliant across the board with four sites showing excessive pugging, six grazing within the 5 meter setback, and nine sites grazing greater than average 10 degree slope. Minimal to no environmental impact noted. Multiple farmer workshops and on-farm meetings throughout the region to discuss the practicalities of IWG and to help

	Number of flyovers	Satellite imagery	IWG site visits or audits	Advice and education	Comment
					farmers understand and improve practices in general. Farm visits undertaken by Council's land management team on occasion also involves discussing the IWG rules with farmers.
Marlborough	1 (150,000 ha)	GIS project mapping locations is being used as a baseline for future monitoring.	No IWG on the dairy farms monitored. Land transition site visits distributing IWG Module.	Email sent to 46 Dairy Farms within district with relevant information and fact Sheets.	Maintaining Website with updated NES-FW Regulations and Fact sheets. Industry stakeholders sent fact sheets relevant to IWG and other regulations Held meetings with Federated Farmers and stakeholders discussing the new regulations and requirements. Online forms created to supply information to council as per requirements of NES-FW Regulations.
Nelson	0	0	0	0	There is no IWG in Nelson.
Northland	0	0	0	0	Fonterra indicated less than 10 farms partake in IWG in the Northland region from their data. There are no IWG concerns in Northland.
Otago	6 (2x North Otago, Central Otago and West/South Otago)	0	36	59 letters sent to properties identified from flyover with some risk and potential breaches of future rules Media release following each set of flyovers	Fact sheets and information on website. Video on IWG good management practice online. The practices and farm management were generally very good. The properties that were breaching the current rules were able to be managed with education discussions. Highest risk factors due to grazing within critical source areas and minimal buffer zones. Farmers were generally able to demonstrate mitigation measures to control sediment loss,

	Number of flyovers	Satellite imagery	IWG site visits or audits	Advice and education	Comment
					that were suitable for the environmental conditions they were working with. Significant liaison with Primary Industry Groups.
Environment Southland	3 (all Southland area)	0	10 follow ups by Land and Water Services team from cultivation flights. 2 Compliance visits		
Tasman	2 (70,000ha)	0	10	Properties which were visited have been contacted and advised of the proposed changes and implementation date change for the IWG regulations	Site visits were undertaken midwinter on properties identified as being at risk of breaching the proposed IWG regulations. The Golden Bay properties had experienced several extreme weather events through July and early August with excessive rainfall in the Valleys. Pugging was seen to be a major issue, the majority of properties were grazing on swedes which disadvantaged them with the proposed pugging rules. No discharge of sediment or effluent to freshwater was identified. Discussions were had about sowing of critical source areas and grazing of grass/crop buffers at the end of the IWG cycle. Concern was expressed at the proposed dates for resowing, a number of farmers have indicated they will not be undertaking IWG in the future.

	Number of flyovers	Satellite imagery	IWG site visits or audits	Advice and education	Comment
					Four community engagement meetings have been organised for October within Tasman Region. These will cover the entire suite of Freshwater related regulations including IWG.
Waikato	0	0	1	0	Discussion with farmer for the one site visit, education and advice given regarding the reported incident. Proactive teams on farm having discussions for clarification of the rules.
West Coast	1 (Flight covering from Greymouth to Franz Josef, the North flight not carried out due to poor weather and then Covid Alert Level Restrictions)	0	0	Regular meetings with Agricultural stake holders which includes local farmers, federated farmers, Westland Milk Products Staff and MPI.	IWG has not been much of an issue over recent years on the West Coast. The Council has a robust monitoring regime for dairy. Any problem areas identified in the past appear to be better managed which may reflect the reduction in complaints.