

Janel Hau

From: Tessa Mitchell
Sent: Friday, 21 March 2014 3:52 p.m.
To: Mailroom Mailbox
Subject: TRIM: FW: Submission on Variation 1
Attachments: Joint Submission on Variation 1 21-3-14.docx

Categories: Purple Category
HP TRIM Record Number: C14C/43851

Submission to Variation 1 attached.

From: Shaun Wilson [<mailto:shaun@grasslands.org.nz>]
Sent: Friday, 21 March 2014 3:47 p.m.
To: Tessa Mitchell
Subject: FW: Submission on Variation 1

Regards,
Shaun Wilson
Operations Manager
Canterbury Grasslands Ltd

Phone: 03 318 6979
Mobile: 0274826600

From: Shaun Wilson [<mailto:shaun@grasslands.org.nz>]
Sent: Friday, 21 March 2014 3:41 p.m.
To: 'ecinfo@ecan.govt.nz'
Subject: Submission on Variation 1

Hi ECan Info

Can you please confirm receipt of this ASAP as otherwise I will drive to CHCH to drop it off if needed.

Regards,
Shaun Wilson
Operations Manager
Canterbury Grasslands Ltd

Phone: 03 318 6979
Mobile: 0274826600

Variation 1 Joint Submission

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Background to our Submission

- The group of affected parties noted below have sent our concerns in as one document. We have done this as we are collectively concerned that too few farmers may submit because they are concerned they cannot make a difference individually.
- Hence we have come together on this on behalf of not only ourselves, but also our wider community and what we understand of our collective concerns.
- Indeed one of the biggest collective concerns about the process is it sees people submitting on a Variation that few people have fully digested and fully understood. Indeed within our collective submissions there is evidence of how people have interpreted the information in different ways and contexts.
- We want to ensure that equal weighting is given to all the points made by each party within this document as everyone is at different levels in their understanding of this matter.
- The parties to this submission are
 - Shaun Wilson (on Behalf of Canterbury Grasslands Ltd)
Phone: 03 3186979 0274 826600
Address: 1982 Rakaia Terrace Rd RD 2 Darfield
Email: shaun@grasslands.org.nz
 - Alistair and Sharon Rayne- Shareholders in Canterbury Grasslands and Farmers in their own right from Darfield
Phone: 03 317 9209
Address: 982 Essendon Road, RD 1, Darfield
Email: as.rayne@xtra.co.nz
 - Harold and Relda Oakley- Local Graziers and Cropping Farmers
Phone: 03 3186836 027 4180341
Address: 1057 Leaches Rd Hororata Darfield
 - Murray Righton- Ellesmere Transport
Phone: 03 3248070
Address: Ellesmere Transport Tramway Road Dunsandel
- As a group and/or individually we would like the option to be heard in support of the submission. If others make a similar submission, we will consider presenting a joint case with them at a hearing.

- The Key areas of concern for us collectively include but not limited to
 - *The accuracy or relevance of ECan's economic impact assessment of the new rules at the farm and community scale.*
 - *Based on the overseer model and general opinion it is more likely people will choose to reduce N fertiliser applied and stock numbers carried to achieve reductions.*
 - *Over emphasis on the baseline as an effective and fair tool for the introduction of any management or reduction process in the short term.*
 - *Defining of water quality limit reductions relating to farming activities without adequate understanding of the impact on farm*
 - *Too much emphasis on Overseer as the PASS FAIL tool. A task for which it is not suited to rather it has inherited.*
 - *Too little understanding of the impact and mitigation options and too few of these present in the monitoring tool in a fashion that gives accurate direction as to changes to make to reduce limits.*
 - *Overemphasis on a change in management system to housing cows as the solutions without understanding the NZ pastoral system or farmer.*
 - *Too little consideration of the cost in both time and resources around short term monitoring relative to the benefit and alternative uses for that resource*

- *The Solutions as we see them are included within our individual submissions within this paper*

Yours Faithfully

Shaun Wilson
Operations Manager
Canterbury Grasslands Ltd
21-3-14

Canterbury Grasslands Ltd

Who we are

- I am the NZ Operations Manager for Canterbury Grasslands Ltd and along with my Senior Management Team are responsible for the Operation of a 2700 Ha Dairy Operation west of Te Pirita on the banks of the Rakaia with a capital value in excess of 100 million Dollars.
- We also have a sister business in Missouri in the USA that milks a similar number of cows under a NZ style system.
- We have a large number of shareholders with extensive experience in the Dairy Industry in New Zealand , USA, Ireland whom have serious concerns that the assumptions people are making regarding the ability of housing cows to reduce N losses. They believe there are seriously flaws based on their personal experience of these systems.
- We currently have approximately 50 people involved in the business in a mix of permanent, part time and contract roles and 27 houses on farm to accommodate them. As they hear more about the proposed changes they are becoming increasingly concerned of how this will affect their ability to progress in farming.
- We are currently at about 85% productivity relative to other properties in our area. We are a system 2 farm which is a grass based system running low stocking rates that we believe is likely to close to or at best practice for our soil and enterprise type.
- Based on the work we have done using the overseer model and the proposed N reductions it is clear the proposed changes will have a significant impact on our NZ operation.
- We have commented on what we currently understand based on a first read of Variation1. It is possible there may be additional matters that we wish to comment upon once we have had more time to digest and understand its content.

What are the positives

1. The positives so far are as follows
 - People generally accept the intent of the changes in respect water quality and leaving the asset in good heart for future generations of NZ'ers.
 - Most farmers will take pride in doing what's right if the changes are implemented fairly and the result is balanced against their genuine concerns.
2. I back farmers and industry to reduce N and P outputs when they are genuinely included in the process of change.

BASE LINE CONCERN

1. In the short term under the proposed rules there will be a period of extreme fear and pain to the industry that in it-self will serve no useful or balanced purpose in effecting change based on the baseline concept as it stands.
 - o The calculation of baseline and monitoring of this until 2017 is a waste of energy and resources when everyone must come back to MGM in 2017.

The graphic below is to help make our point and for the exercise assume three separate farms on the same soil type on the same road, i.e. neighbours who could be Dairy, Winter Grazer or Cropping.

Assumes that an average of 30 N loss is set for 2017 and this means Dairy gets 42. i.e Based on 13/14 Season two farmer will be compliant in 2017 and 1 will not.

EXAMPLE 1							Target 42						
Average 34.5							30% reduction						
							???	???	???	???	???	???	
							???	???	???	???	???	Target 30	
							???	???	???	???	???	???	
							???	???	???	???	???	???	
							???	???	???	???	???	???	
							???	???	???	???	???	???	
N Loss	30	34	36	38	42	34.5	34.5	??	??	??	??	??	??
Season	09/10	10-11	11/12	12/13	13/14	14/15	15/16	16/17	17/18	18/19	19/20	20/21	21/22
EXAMPLE 2							Target 42						
Average 42							30% reduction						
							???	???	???	???	???	???	
							???	???	???	???	???	Target 30	
							???	???	???	???	???	???	
							???	???	???	???	???	???	
							???	???	???	???	???	???	
							???	???	???	???	???	???	
N Loss	44	42	43	38	42	42	42	??	??	??	??	??	??
Season	09/10	10-11	11/12	12/13	13/14	14/15	15/16	16/17	17/18	18/19	19/20	20/21	21/22
EXAMPLE 3							Target 42						
Average 55							30% reduction						
							???	???	???	???	???	???	
							???	???	???	???	???	Target 30	
							???	???	???	???	???	???	
							???	???	???	???	???	???	
							???	???	???	???	???	???	
							???	???	???	???	???	???	
N Loss	58	54	54	52	58	55	55	??	??	??	??	??	??
Season	09/10	10-11	11/12	12/13	13/14	14/15	15/16	16/17	17/18	18/19	19/20	20/21	21/22

In all cases they found out 2 weeks ago that they must now take action (dry off cows?) to reduce N loss for 13-14 season to below their average but as yet they do not know their 4 year average or understand the model and what mitigation is available to them. They are likely representative of 90% of farmers in Canterbury today.

Example 1: Farm has been developing and capital has been sunk in the last 5 years to enable it to achieve the same results as its neighbour.

Impact: He must immediately take action to reduce N loss by 18% this season and hold this for the next 2 seasons and then maybe he will be allowed to lift in 2017.

Example 2: Farm has been established 5 years more than his neighbour and is now tweaking the system all grass which means still some seasonal variation in production and N loss occurs.

Impact: He can relax this season as long as his number is accurate and hold this until 2017 after which he will need to plan his reductions.

Example 3: Farm has been established 5 years more than his neighbours and is now tweaking the system on higher input which removes most seasonal variation.

Impact: He must immediately take action to reduce N loss by 5% this season and hold this for the next 2 seasons and then he must come back a further 24% before 2017

Discussion

1. All three farmers will be treated differently and inequitably until 2017.
2. The industry and ECAN will spend a huge amount of money identifying baselines and monitoring non complying farmers.
 - Failure by ECAN to effectively monitor and enforce policy until 2017 will likely result in another body and (potentially) some farmers forcing adherence to the Policy.
 - Another Representative Body takes on farmers themselves using these rules
 - Farmer in example 1 gets that annoyed about his position relative to the other two he takes action.
 - Change in Government would likely have compounding effects.
3. NOTE: If the decision in 2017 was even more draconian than expected at say the lessor of Baseline or MGM then I shudder to think of the reaction from these three farmers.

Solution

1. Accept that farmers have got the message and amend the method for baseline calculation to no more than the highest of the years from 09-10 till 13-14. Call this the "Fair Baseline"
2. All farms will still have to come back to MGM but get this number out by end 2015 so that farmers have two years knowing what level they are aiming for.
 - a. How can you plan reductions when you do not know the target?
3. Require farmers to register their "Fair Baseline" by end of 2017 and then complete first round of monitoring on
 - a. Any farm that has increased their N loss above fair baseline prior to 2017.
 - b. Any farm who's "Fair Baseline" was above MGM
 - c. The rest

30% REDUCTION CONCERN

1. The defining on a reduction in MGM in the variation is patently unfair based on the sheer volume of what we **don't** know.
 - a. Firstly the tools are not working accurately enough to identify the current N loss.
 - b. The science relating to N loss is still being debated and as such the full impact that is still coming from farming is not truly understood.
 - c. The mitigation options are not known well enough and many that are currently being mooted are suitable only for a very small percentage of the farming population.
 - i. Herd homes or their equivalent.
2. Farmers accept in general that it must reduce. At the moment the variation is saying 30%. For many farmers this will be more than 30% based on where they sit today relative to the final baseline. As such it could be 46% or more for some farms.
3. The biggest risk to Dairy is the wintering off of cows and there is a clear preference within most NZ dairy farmers to solve this without the addition of concrete and steel structures.
 - a. Indeed there are five defined "Dairy Systems" that all Dairy farms generally fall within.
 - i. See Dairy NZ for detail on this.
 - ii. In general farmers will be extremely good in 1- 2 of them and very poor in at least 1 of them if not more.
 - b. Financial comparison of these systems by Dairy NZ generally shows that no one system is consistently more profitable than another, rather the most important factor is the system that the farmer is passionate about will be the one they are most profitable at.
 - c. As such forcing people to one system will only compound any reduction in average profitability.
4. We have considered one of a number of systems that might meet the 30% reduction. The system modelled assumes changes in cow efficiency from science and a significant reduction in the use of N based fertilisers but is predominantly based on a stocking rate reduction in cows with an increase in per cow performance in line with a grass based system.
 - a. I still have shareholders who (with good reason) do not accept my contention that we **might** be able to lift per cow performance under this system
5. The Physical impact on Canterbury Grasslands of this is as follows
 - a. A reduction of 28% in cow numbers.
 - b. A reduction in production of Milk solids by 24%.
 - c. Mothballing two dairy sheds to fully utilise remaining shed assets.
 - d. 10 FTE Dairy Staff and two support staff will be made redundant
 - e. Reduce N use by 60% and accept we grow less Grass in Total
 - f. Reduce Total Replacements by 30% and bring 62% of these home
 - i. Net effect is 73% less heifers grazed with other farmers

6. The Financial impact of this is as follows
 - a. Large numbers of cows will come on the market and have to be killed due to no home seeing a loss in value in the business beyond just the cows book value
 - i. Flows on to a reduction in the National Dairy herd and a corresponding impact on beef animals available to finish, veal production and reduction in need for Breeding bulls.
 - b. 24% reduction in Milk Revenue
 - i. Capital investment required by Fonterra for Plant will reduce as milk flows reduce.
 - ii. Surplus Vats and Plant will be available for those that do convert to dairy thus reducing the need for new plant.
 - c. 27% reduction in expenditure in our community (3 million Dollars) to offset the production drop across most cost centres. I struggle to think of any local business that will be insulated from this.
 - d. A 20% reduction in farm Surplus
 - e. A 2% reduction in interest/finance/ business and depreciation costs from the sale of assets.
 - f. A 53% reduction in profit before tax
 - i. 1.65 million dollars less taxable income
 - g. Most concerning is a 52% reduction in Return on Equity which is what we all look to when we choose where to invest capital.
 - i. I have no doubt that this would see Canterbury Grasslands seriously consider ceasing further development of its New Zealand business and transferring capital and capability to its American operation or to other countries.
 - h. Indeed I see this as one of the biggest risks to the Industry is the loss of people capability to other countries as people seek opportunities for rapid financial advancement elsewhere.

Solution

1. Accept that there is significant work to do to define what and how we change and that we must collectively invest more in answering these questions and providing farmers and the community with pragmatic and realistic options that most can accept and understand.
2. **Slow down** and get it right.
3. Do not define the reduction now for 2022 and create a fear reaction within the industry.
 - a. Dumb decisions will be made if this occurs
4. Modify the wording to recognise a reduction must occur beyond 2022 but let science catch up and undertake more robust discussion based on facts.
 - a. This has been a collaborative exercise from a group of well-meaning people based on emotion because they don't trust the industry.

CREDABILITY CONCERNS

1. ECAN have underestimated the reaction of Farmers towards these policies
 - a. Too many farmers have failed to understand the full potential implications of these changes to their business.
 - b. As their awareness increase ground level attitude is turning to anger
 - i. The CPW Nutrient allocation has seriously undermined trust in ECAN
 1. Fewer Hectares are likely to be involved as CPW are most likely to modify their planned mix on land use to keep the scheme compliant.
 2. Farmers who have bought shares in Stage 3 must soon become nervous given they will be last on.
 3. Fewer Ha in the scheme will likely result in an increase in costs per ha to those remaining in the scheme thus impacting on their financials for years to come.
2. Not enough understanding of the impact of these changes at a range of levels
 - c. The Overseer model needs considerable work to serve its purpose accurately.
 - i. In its current form it cannot give quality information of changes that can be made that **will** achieve future compliance.
 1. It has neither the scope to accept the variety of situations in place on farm nor the
 2. Accuracy in its assessment of changes in practice relative to true N loss
2. The financial implications of the changes are yet to be fully understood and the farming community does not believe that ECAN or others really care.
 - a. There appears to be assumptions being made of increased activity from other sectors or sources filling the void.
 - b. It was a number of years ago that someone said it was time to move “From a Brawn to a Brains Economy” and in that time we have continued to down play the worth of sectors involving manual labour as not fitting a vision of New Zealand’s future. It is about time people recognised the success of our economy continues to be driven by the primary sector.
 - i. We do not ask for thanks just recognition of the reality.
 - c. Let’s consider the efforts to drive the organics business which was to create a product that everyone would want due to its organic nature and as such pay a premium for this adequate to offset the productivity loss from reduced inputs.
 - i. Despite the best intentions of the people advocating this system and seeking to convert the primary sector to this it continues to fall short of being more than a niche.
 - ii. This is not an attempt to deride organics. Indeed I would relish the challenge of driving a large herd organics approach if there was a place for it.
3. The mitigation factors are either not fully understood or in some cases patently wrong.
3. Many opportunities exist to mitigate Nutrient loss through ensuring people are planning designing, building operating and monitoring the use of their resources but as yet we have no clarity of how these relate to the model which relates to the PASS FAIL mark

4. The timing and delivery of the changes is out of step with common sense
 - a. Acceptable N Loss Standards are unknown but people must align their systems to their interpretation of what they may be.
5. Farmers will be set against each other based upon these rules
 - o There will be a need to allocate N loss by either soil type enterprise or other factors.
 - o There will be winners and losers no matter how it is done and this will create significant discord.

Solution

See solutions for 30% Reduction

Wintering Barn Concerns

1. There appears to be a general belief expressed by some that wintering barns and DCD are (or were) THE solution to most of the issues.
 - a. Clearly one of these is off the table and whilst science will keep looking we cannot sit here today and credibly suggest what role it will play beyond “some”
 - b. The Wintering barn fraternity appears to be a small and very vocal minority that has managed to get more favour than it deserves in this debate.
 - c. My self and others will be spending considerable time looking at this option but based on the feedback from many people in our industry that I have spoken to recently there is a serious level of concern with the assumptions being made about the effectiveness of wintering systems
 - d. It is amazing that no one has discussed hand in hand with this option the potential Animal Welfare concerns that surround these systems.
 - i. Whilst I do not remember the details I do recall the public reaction when these were suggested as a mitigating solution for the McKenzie Country.

Solution

1. That people involved in this process ensure they are accepting a balanced range of opinions rather than looking for a “cure all”.
2. That care is taken to ensure that farmers are actually being heard in the process around mitigation strategies rather than just the appearance of consultation with a group holding a vested interest.
3. As a levy payer I expect my Industry organisations (Dairy NZ, Federated Farmers, and Fonterra) to build my case on these matters in an appropriate and accurate manner and can only hope they are getting a fair hearing. Personally I am not convinced of this.

Physical Comparison of Systems

Base Farm System	CGL Budget			CGL Revised	
Production Assumptions		Change			
KG MS Produced (1000,s)	2760	-650		2110	-24%
Milk Price	\$7.00			7	
Dividend	\$0.30			0.3	
Peak Cows Milked	7260	-2000		5260	-28%
Replacement Rate	25%			25%	
Replacement Hfhrs	1815			1315	
Production per cow (kg MS)	380			401	
Milk Produced per Effective Area (Ha)	1301			995	
Infrastructure Assumptions					
Number of Dairy Sheds	8	-2		6	-25%
Total Bales	420	-100		320	-24%
Cows per Bale	17			16	
Staffing Assumptions					
Total Dairy Staff	36	-10		26	-28%
Total Support Staff	2	-1		1	-50%
Total Business Staff	4	-1		3	-25%
TOTAL FTE	42	-12		30	-29%
Cows/Dairy FTE	202			202	
Cows/Total FTE	173			175	
Farm Area Assumptions					
Irrigated Ha	2080			2080	
Dry Ha	458			458	
Total Pdk Ha	2538			2538	
Dairy Irrigated	1978			1978	
Dairy Dry	287			287	
Dairy Total	2265			2265	
Dairy Effective Ha	2122			2122	
Stocking Rate per Total Ha	3.21	-1		2.32	-28%
Stocking Rate per effective Ha	3.42	-1		2.48	-26%
Nitrogen Assumptions					
Total Pasture Yield per Ha	15000			13391	
Nitrogen Used Tons	565			200	
N Used per Ha	222	-134		88	-60%
Average N Response Rate	12			12	
Assumed N Grass in Budget	2669			1060	
Base Pasture Yield	12331				
Management System Assumptions					1454
	Reduction In MS	KG DM/KG MS	Eff Dairy Area		
KG DM/Ha released from Milk	-650	10	2122	3064	
Less Reduction Pasture Produced				1609	
Additional Dm available on Farm/Ha				1454	
Results IN:					
Bring Home Replacements					
Feed required for 1 hfr and 1 calf	3800	823	812	1474	
Proportion of Hfr Grazing			62%		

Financial Comparison of Systems

CGL Budget			CGL Revised			
Income	Total 1000'\$		Reduction in Variable Component of Cost Centre	Total 1000'\$	Net Change	%age Change
Milk Income	\$19,320			\$14,770		
Milk Dividend	\$828			\$633		
Net Stock	\$461		-28%	\$332		
Other	\$10		-25%	\$10		
Total Income	\$20,619			\$15,745	-\$4,874	-24%
Expenditure	Total \$		Reduction in Variable Component of Cost Centre	Total \$		
Wages	\$3,416		-25%	\$2,733		
Admin	\$126		0%	\$126		
Animal Breeding	\$144		-25%	\$108		
Animal Health	\$502		-25%	\$377		
Calf rearing	\$92		-25%	\$74		
Electricity	\$153		-25%	\$126		
Fertiliser	\$385		-25%	\$361		
Forage	\$1,424		-25%	\$1,068		
Hfr Grazing	\$1,481		-62%	\$566		
Freight	\$81		-25%	\$61		
Herd Improvement	\$81		-25%	\$61		
Housing	\$51		-25%	\$38		
Insurance	\$99		0%	\$99		
Irrigation	\$861		0%	\$861		
Nitrogen	\$1,034		-60%	\$414		
Pasture renewal	\$144		0%	\$144		
Rates	\$143		0%	\$143		
Repairs and Maintaianance	\$205		0%	\$205		
R&D	\$95		-25%	\$71		
Shed Expences	\$97		-25%	\$85		
Supplements	\$563		-25%	\$422		
Vehicles	\$189		-25%	\$165		
Weed and Pest	\$54		0%	\$54		
Expenditure	\$11,420			\$8,362	-\$3,058	-27%
Farm Surplus	\$9,199			\$7,383	-\$1,816	-20%
Total Finance incl Depreciation and Business Costs	\$6,037			\$5,887	-\$151	-2%
Profit before Tax	\$3,162			\$1,497	-\$1,665	-53%
<i>Note: Excl Livestock Change Adj</i>						
Return on Equity	6.9%			3.3%	-3.6%	-52%



19 March 2014

Dear Sir

Proposed Reductions in Fertiliser Application

We have been advised that there is a proposal to restrict the amount of fertiliser applied to Canterbury farms and wish to advise of the impact that this will have on our business. We are a long-standing supplier of fertiliser and transport services to the Canterbury farming community with our company having been established in 1939.

In the event that the proposed reduction in levels of fertiliser application is to proceed we have estimated that there will be a significant reduction in all of our business in the agricultural sector and this will result in a loss of several million dollars. Should this occur then we will need to review our investment in fertiliser supply and application as well as all other freight operations but especially in livestock numbers carried. This will have a serious negative impact on the numbers of people ~~we~~ ^{that we} can continue to employ. There will without doubt be a number of redundancies.

As well as impacting on our business, especially with a resultant necessary reduction in our work force, a number of our suppliers will also be affected. For example with the reduction in turnover there will be reduced expenditure on fuel, tyres, parts and road user charges.

There will also be a wider impact on local businesses, not just Ellesmere Transport in that with a reduction in the workforce the money which these employees would have normally spent in the local community will no longer be available to be spent. So many local businesses such as supermarkets, garages, clothing stores, etc will also suffer a reduction in turnover and profitability. There could very well be a negative cascading impact on those local businesses and further job losses could well occur in those businesses as well.

Yours faithfully

A handwritten signature in black ink, appearing to read "MA Righton", is written over a horizontal line.

MA Righton

STATION STREET, LEESTON. PHONE 03 324-8070 FAX 03 324-3716
TRAMWAY ROAD, DUNSANDEL. PHONE 03 325-4039 FAX 03 325-4310

Inisfree Farm

Submission to Environment Canterbury on the Proposed Variation 1 to the Proposed Land and Water Regional Plan

We would like to be heard in support of the submission. If others make a similar submission, we will consider presenting a joint case with them at a hearing.

Introduction

I am Alistair Rayne and my wife Sharon and I farm our own operation on the outskirts of Darfield and are shareholders in Canterbury Grasslands Ltd. Sharon is also a Director of Canterbury Grasslands. We both have extensive experience in the NZ Dairy Industry as well as first-hand experience of farming in Ireland and Missouri. We are writing to express the very significant concerns we have with the proposed "Variation 1". Our concerns centre round the proposed N leaching rates and the associated and very serious economic and social impacts of the suggested rules. Our concerns can be summarised as follows:

Concern 1: That ECan's proposed reduction in N leached is not at all linked to the development of viable/realistic mitigation options.

Concern 2: That ECan has not adequately considered the very serious social and economic impacts of the proposed Variation, particularly its impact on farm businesses.

Main Reason for these Concerns: The scale of the planned reduction in nitrogen leaching is not possible without calamitous financial and social cost. There are few affordable and effective mitigation options available to farmers.

Proposed Solution: Link on-going reductions in N leaching to the current availability, viability and affordability of tools which will achieve this objective.

Commentary

Our dairy farm business has been for some time consistently in the top 10% of farms for EBIT/ ha, achieved through the careful and efficient use of resources. We have an average size farm with 700 cows, and average level of debt. At the current long run milk price of \$6.25/ kgMS, if we were to reduce our environmental footprint by using the best tools currently available to us, the business would barely support our own family. Our spending in the local community to other farmers, local and regional businesses, and local services would drop in excess of \$300,000 pa. As the debt servicing of all farmers would be greatly reduced, the value of farms would plunge with consequences for the financial sector, concurrent with a weaker dollar bringing imported inflation and higher borrowing costs for all NZers.

Based on our analysis, the only two options for us to reduce our N leaching by 20% is to either: 1) cut stocking rate 20%, or 2) to build a standoff pad to reduce urine on pasture. An assessment of

each of these options, detailing the serious impacts of adopting each of the options, is provided below. We hope these will demonstrate the predicament and very real risks Variation 1 presents.

Option 1. Reduce stocking rate 20%

Currently we have 700 cows wintered, fixed costs including depreciation are 46% of total costs. In addition interest payments are \$1.40/kgMS. Profit at a \$6.25 milk price is \$330,000 to meet development and debt repayment, tax and living.

If we reduce stocking rate 20%, cows drop to 560, but fixed costs remain and interest drops only very slightly (sale of some cows). The **profit then drops** to \$100,000 (before development, debt repayment, tax and living) and a simple rise in interest rates of 1% would lower that to \$60,000.

Option 2. Build a standoff pad

(Note a cow barn would be hopelessly uneconomic and I have seen this first hand from working intensively with Ireland's Dairy Industry for four years in the 1990's).

The standoff pad would be used for on-off grazing in autumn and for wintering the cows full time with bought-in silage. The objective being to control the urine as this drives much of the N loss.

Our 700 cows will require a pad the size of a rugby field. There would need to be a large purpose built lagoon to hold 5 million litres of effluent and a pumping system to disperse it. It would require about 6000 cu m or 220 truckloads of wood chips with a high sided truck. Annually the pad would require renewal of one third to one half of this bedding.

The financial outcome would be the same as Option one, perhaps worse if wood became scarce or fuel prices increased.

There are risks with the pad. The odour and sight of these confined cows would not sit well with many people, given overseas experiences. The dispersal of so much stored effluent would take perhaps a month of pumping through an effluent irrigator. Also given the cows would be feeding on the same site, they can look fairly mucky, which will raise some welfare concerns based on visual perceptions. In addition the disposal of 60 - 100 truckloads of fouled wood chips will need to be considered.

Part of the reason for the drop in profit of a stand-off pad versus wintering on conventional crops such as kale grazed by cows, is that all harvesting will have to be done mechanically (as opposed to grazing in situ). There would be a lot of fossil fuels used throughout this option. Ironically it's a long way from "green".

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Submission to Environment Canterbury on Proposed variation 1 to the Proposed Canterbury Land and water Regional Plan

We farm cropping and dairy support land in Glenroy, Central Canterbury. Glenroy is in the Selwyn Waihora sub region of the proposed Canterbury LWRP. None of our farmland is irrigated.

During the last five years our farming practice has had a Nitrogen (N) loss average of around 50 -60 kg N per year.

If proposed variation1 is ratified and sets an N loss limit of around 25 -30kg per year we will be forced to change our farming enterprise radically.

Achieving a halving of N loss from our farmland by 2016/17 will require a reduction of the cropping and dairy support areas by approximately 60% with this land put into sheep and beef production.

Given the high fixed costs on our farm and the usual variable costs associated with sheep and beef farming this is, at current values, a loss making enterprise.

To cut the slightly profitable enterprises of cropping and dairy support down to 40% of present levels will provide insufficient profits and cause business failure.

	Sheep (\$/ha)	Crop (\$/ha)	Winter Cow Grazing (\$/ha)
Fixed Costs	900	900	900
Variable Costs	750	1500	1400
Income	<u>1250</u>	<u>3600</u>	<u>3200</u>
Surplus available for debt repayment and reinvestment	(400)	1200	900

Current situation on 300 ha:

ha		Surplus (\$/ha)	Farm Surplus (\$)	N loss/ha	Farm N loss
140	Winter cow grazing	900	126,000	55	7700
140	Cropping	1200	168,000	55	7700
<u>20</u>	Sheep	<u>(400)</u>	<u>(8,000)</u>	<u>10</u>	<u>200</u>
300			286,000	52	15600

Halve N loss to 26 kg N/ha

55 ha	Winter cow grazing	900	50,000	55	3000
55 ha	Cropping	1200	66,000	55	3000
<u>190 ha</u>	Sheep	<u>(400)</u>	<u>(76,000)</u>	<u>10</u>	<u>1900</u>
300			40,000	26	7900

A forced reduction of N loss to 25 -30 kg will cause a severe loss of profitability allowing insufficient money to live on and nothing for reinvestment. As a consequence the farm will have reduced bankability and market value. The resulting loss of profitability and equity is likely to dispossess our family of its farmland.

At present there seems to be no viable way to mitigate N loss significantly other than to change to uneconomic farming enterprises.

Other effects of this radical forced change of farming enterprise in our business would include:

- a) The loss of winter grazing for 3,000 dairy cows. Presumably these cows will not find anywhere else to be winter grazed due to N loss limits on all other grazing farms. These cows will need to be killed. Once dead they are unlikely to be able to continue producing revenue for the people of New Zealand.
- b) The loss of crop production (mainly wheat) will require replacement with imports from other countries. It will also cause a loss of business to local cartage companies and rural contractors of around \$60,000 per annum.
- c) A gain in sheep production. However, this is very small and no sector of the sheep industry is currently profitable or is capable of becoming so in the foreseeable future.
- d) The loss of a farm employee and his wife from the district and their two children from the local school.
- e) A loss of spending generally in the rural and wider economy.

The overall effects of this proposed N loss regime will be particularly severe on cropping and dairy support farms causing a level of economic and social pain not seen since the “Rogernomics” reforms a generation ago.

We recognise the desirability of N loss reductions.

We recommend that N loss reductions be phased in starting from their current individual farm baselines (2009 – 2013 average N loss) over a period of at least 25 years. This may allow science to catch up and help farmers to reduce N loss in ways that do not overtly threaten their hard won assets and livelihoods. It may also save Canterbury from a serious economic ‘jolt’, its worst effects coinciding with the end of the post earthquake building boom.

A handwritten signature in black ink, appearing to read "HPOakley". The signature is written in a cursive, flowing style.

Harold and Reida Oakley