

Farming More Sustainably

*what can we do better and
who can help?*

Farming for the Future Presentation

4 April 2017

Karen Williams

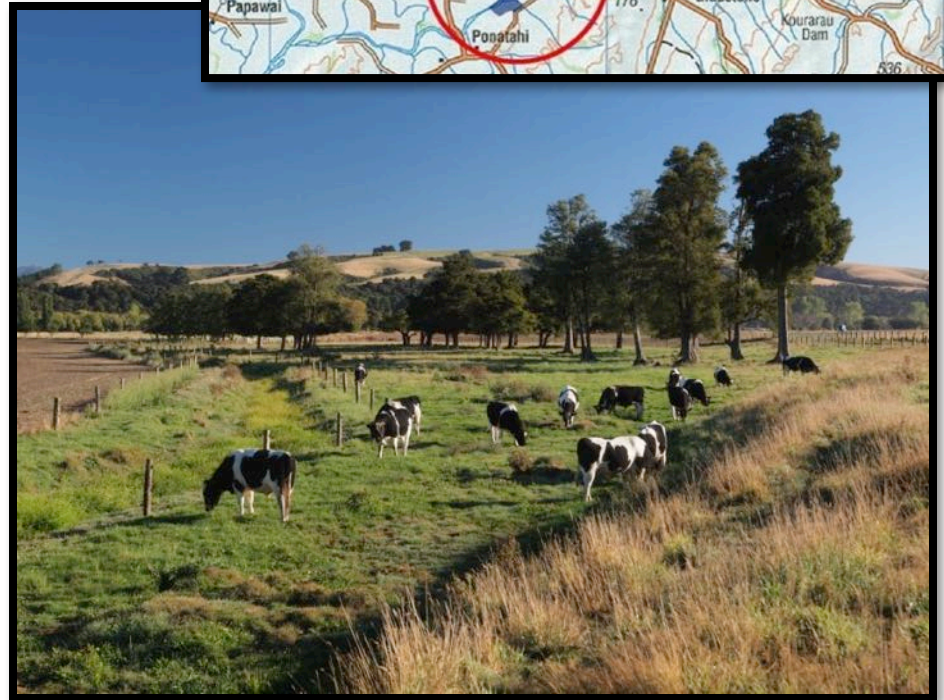
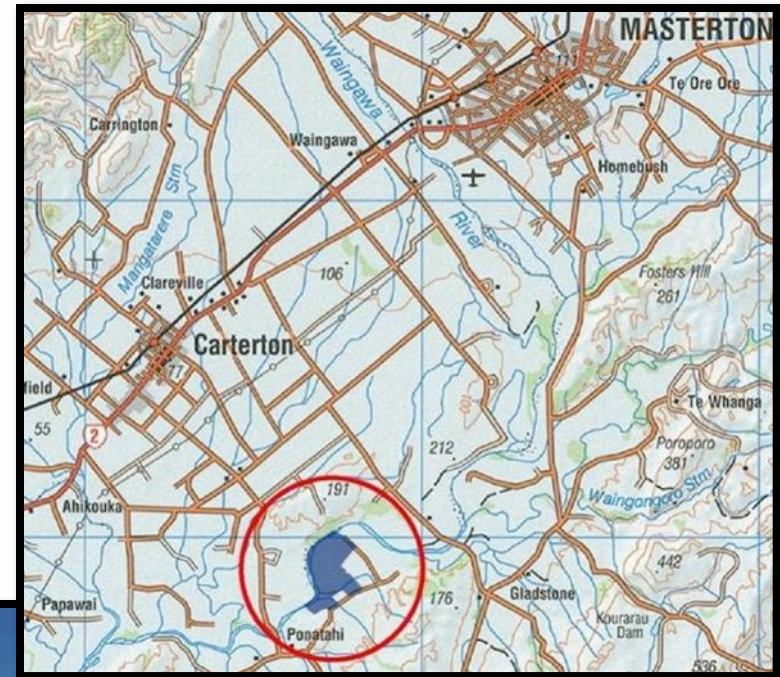
My friend asked me to help him round up his 37 sheep.

I said "40."



Ahiaruhe Farm

- 224 ha of flat alluvial silts
- 2.8kms adjoining Ruamahanga River
- 2 farming systems
 - cropping
 - livestock finishing
- Crops: barley, wheat
Seeds: red clover, ryegrass, coriander - NO peas
- Capacity to irrigate up to 160ha



**HERE WE SEE A SMALL HERD OF DEER
CROSSING A CREEK TO CONTINUE THEIR
NEVER ENDING SEARCH FOR FOOD.**

Serfas Farms Ltd.



How do we minimise our impact on the environment ?

3 key areas:

- Soil management
- Water management (quantity and quality)
- Biodiversity enhancement

Soil management

Machinery policy

- direct drill, no cultivation of soil
- tracked harvester



Stock policy

- bulls wintered off cropping land and sold before 2nd winter
- low stocking rates of trade lambs, local supply



Water management

- Soil moisture monitoring for irrigation
- Whole farm nutrient management plan
- Targeted application of pesticides through constant monitoring
- Grid soil sampling - precision spreading of fertiliser with proof of placement

Grid soil sampling





Grower Michael Williams

Farm Ahiaruhe Farm

Field Ollie

Prescription Report



Zone Map

Olsen P

Avg Olsen P = 19.7

Id	Area (ha)	Olsen P
1	0.5	14.64
2	3.7	16.17
3	3.8	19.57
4	1.2	22.39
5	1.3	25.14
6	0.4	34.78

Comments:



Proof Of Placement Map



CUSTOMER NO: 60840551

CUSTOMER NAME: WILLIAMS M & K - AHIARUH

COMMENTS: VRC

APPLIED BY: Spreading Wairapa #358

DATE: 20/10/2014 11:02:17 a.m.

AREADONE: 4.7 ha

PRODUCT: 1000000-Superphosphate

RATE (kg/ha or l/ha): 500.0



0 100 200 400 Meters
1 centimeter = 76 meters



Visit our website and log into My Ravensdown to view your proof of placement maps online

0800 100 123

www.ravensdown.co.nz

Copyright Ravensdown Fertiliser

SPREAD ID: 211016

SPREAD FILE NAME (UPLOAD JOB ID): 60840551_WILLIAMS M & K - AHIARUH FARM_20Oct2014_110217.GDX (M99888) 20 October 2014

Biodiversity enhancement



- Ruamahanga River and all streams fenced
- Extensive riparian planting

QEI National Trust Covenant

- 2 hectares
- Infill planting
- Pest management



Building better biodiversity on cropping farms

- 3 year SFF/FAR project to improve the **productivity** and **sustainability** of arable farms
- Project monitored beneficial insect types and numbers in on-farm habitat
- Beneficial insects can control pest species and pollinate crops for free!
- Outcomes:
 - improve farm productivity
 - enhance farm habitat
 - reduce reliance on agri-chemicals and external pollination for crops



Engagement on Farm

- Community planting days
- Host regulators on farm (MPI, GW, CDC)
- BFEA field day
- Nuffield Scholars



Why do we do what we do?

Ahiaruhe Farm Philosophy:

We believe we live and work in a really special place and that we have a responsibility to look after it. Whilst our vision is to grow a successful business, this will be achieved while **maintaining the high quality of our soils, improving the quality of freshwater and through continued habitat enhancement.**

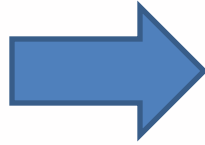
We wish to undertake our farming business in a happy and rewarding environment, for ourselves, our family and staff, and to foster good relationships with contractors, neighbours and the community. We hope our children will continue this philosophy in the future.

Why is making a profit vital?

- Grow high quality food
- Minimise environmental impact
 - precision agriculture & machinery
 - retiring land
 - low stocking rates
 - monitoring
- Support local community, businesses and contractors
- Employ more staff



Profitability



**Environmental
Sustainability**

If we can view profitability as an “enabler” of environmental sustainability, it will help foster more positive community discussions around improved farming practice and environmental outcomes

Community flow on effects

“For every dollar of FOB (free on board) sales from our industry another dollar goes into our rural towns and our urban cities”

Sam McIvor (B + LNZ Annual Report 2015-16)

“Dairy farmers are spending \$12.2 billion on goods and services within their communities to support their operations”

Rural News (March 7 2017)

“NZIER found irrigation contributes \$2.2 billion to the national economy”

Minister of Local Government (Irrigation NZ News, Summer 2016)

Profitable and Sustainable Farming – Challenges and Opportunities

- The global sustainability agenda
- Regulation
- Engagement and consultation
- Community ownership of environmental challenges
- Negative perceptions
- Future leadership
- Developing more resilient markets
- Precision agriculture - affordability and capability

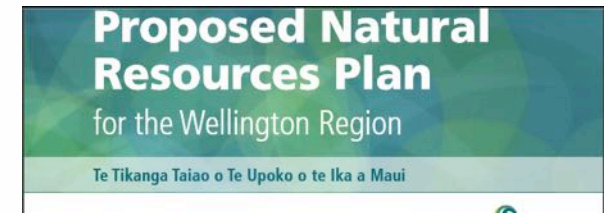
The global sustainability agenda

“the challenge of meeting the world’s growing demand for food, whilst reducing agriculture’s ecological footprint, and sustainably managing earth’s scarce natural resources (in particular land and water)... whilst maintaining a viable business”.

Source: Sustainable Returns - Finding the Value in Environmental Sustainability” Rabobank Agribusiness Report, Special Edition

Regulation

- Required by statute
- A necessary “stick” approach for some
- Better outcomes for most with a “carrot” approach

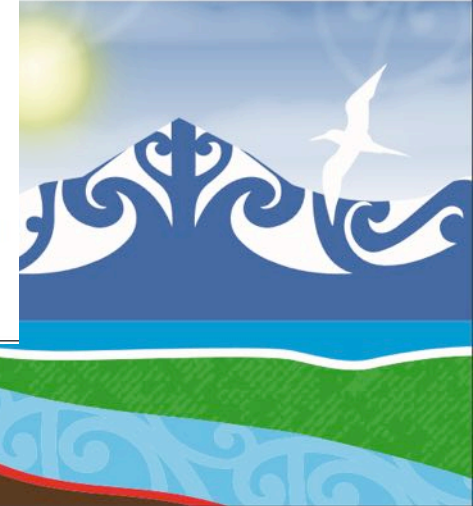


Reprint as at 1 March 2017



Resource Management Act 1991

Public Act 1991 No 69
Date of assent 22 July 1991
Commencement see section 1(2)



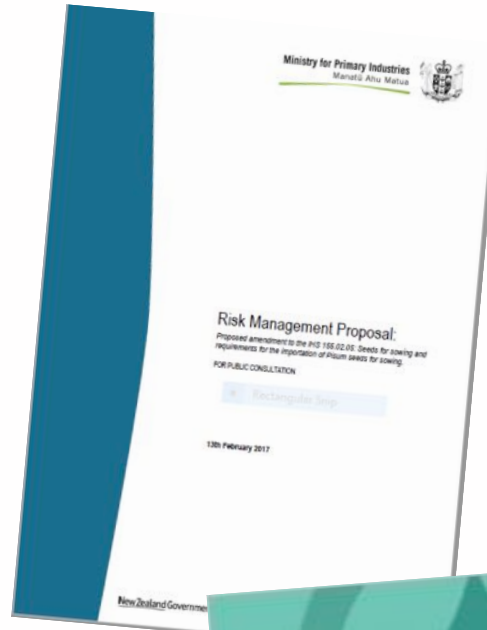
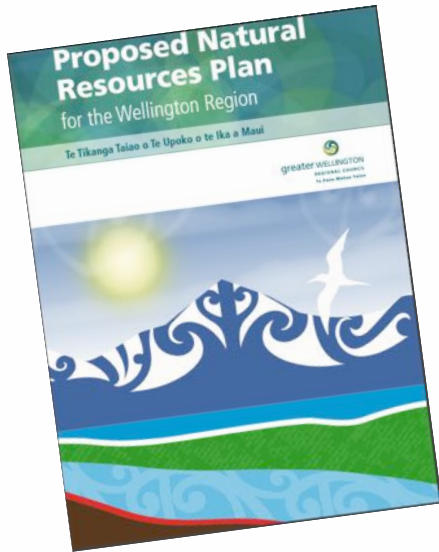
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Local rules of concern

- Nutrient allocation
- Water allocation
- Legitimate farming effects
- Farming by resource consent



Engagement and consultation

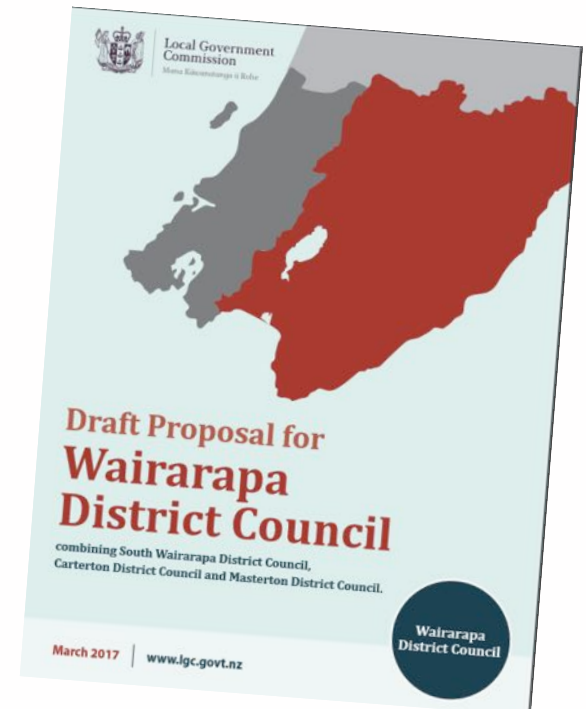


How is Floodplain Management Planning happening in the Wairarapa?

about 1 year ago



**Te Kāuru Upper
Ruamahanga
River Floodplain
Management
Subcommittee**



Engaging with farmers

*“Ask not what your farmer can do for you
but what you can do for your farmer”*



“Whole” community ownership of environmental problems



Greater Wellington recognises the need for whole community solutions

“Without buy-in from all the interests in local communities it is very hard to get lasting agreements on how to manage freshwater issues.”

“It’s also fundamentally important to understand that **the quality of water in streams and rivers is not just the result of farming practices.** Urban contamination is also a major contributor and the programmes of action will be a mix of urban and rural actions.”

Press release about NZ’s environmental performance by Chris Laidlaw, Chair of the GWRC, posted on 22 March 2017

Correcting perceptions

- Encourage fair and informed debate
- Resilient communities need citizens that contribute to all aspects of our wellbeing:
 - Environmental
 - Economic
 - Social
 - Cultural



Word of the year 2016

Post-truth means:

“relating to or denoting circumstances in which objective facts are *less influential* in shaping public opinion than appeals to emotion and personal belief”.



Be discerning of the truth

Wairarapa Times-Age

Local News ▾

Sport ▾

Photo

Video

Midweek

Property

Classified ▾

River toxin at large

5:04 PM Wednesday Jan 25, 2017



By Gerald Ford

Toxic algae in Masterton's Waipoua River is likely caused by farming and may be impacting stream life, according to an agricultural scientist.

- “Toxic algae in Masterton’s Waipoua River is likely caused by farming” WTA 25/1/17
- GW scientist states it is a complex issue with a number of drivers behind algal growth. More research to be done.

Capability for change

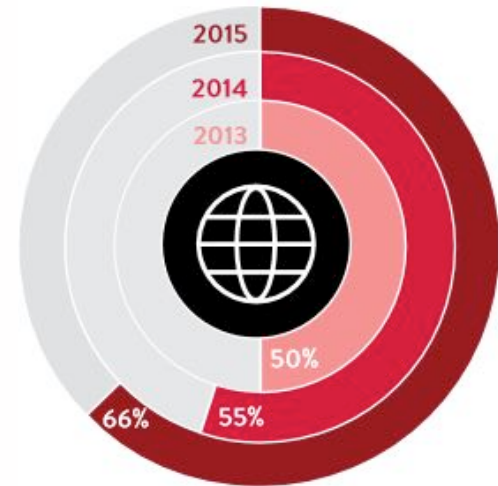
- Great leadership required for changes to greater sustainability
- Target the best and brightest in schools
- Scholarships
- Farm kids in policy development roles



Develop more resilient markets

- Huge potential growth in NZ market
- Sell “our” story
- Mandatory labelling of ingredients
- Consumer demand for sustainably grown food
- Wairarapa Cropping Strategy

Source: The Sustainability Imperative - New Insights in Consumer Expectations, Nielsen, October 2015



SIXTY-SIX PERCENT
OF GLOBAL
RESPONDENTS
ARE WILLING TO
PAY MORE FOR
SUSTAINABLE
GOODS, **UP FROM
55% IN 2014 (AND
50% IN 2013).**

Precision agriculture

- Affordability and capability
- Yield mapping
- Self steer tractors
- Variable rate irrigation
- Satellite or drone imagery
- Self-propelled tractors

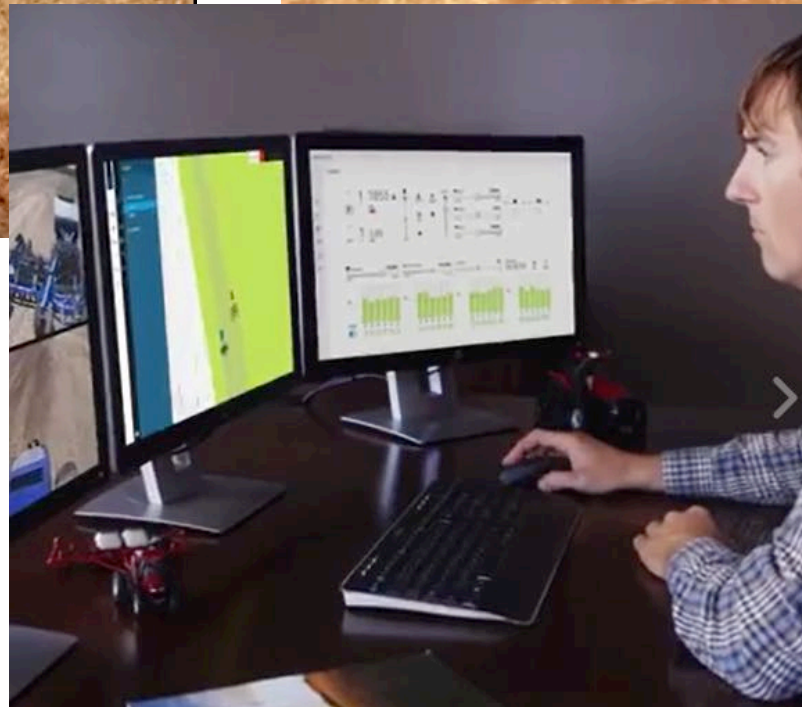


Yield mapping

- Measuring and mapping over time of parameters such as crop yield, moisture and elevation
- Creates maps that enable users to vary the amount of seed, water, fertiliser, nutrients, pesticides and herbicides that are applied *within* each paddock
- Provides opportunities for decision making on a sub-paddock level
- Environmental and economic win:win



Self propelled tractors



The future of farming for an optimist



The more likely reality!



Sustainable communities together



Karen Williams - 4 April 2017