Let’s not lose our collective nerve on Water Quality

Fresh water is not one issue, but a cluster of issues

The protection of water quality has taken centre stage in New Zealand. Water has become a proxy for concerns that environmental values are being dominated by economic gain. Managing water tests all our abilities to take collective responsibility.

Conflicts between competing users and how the resource is managed are growing rapidly. The public mood is moving towards the need to, at the very least, match growth in use with the same level of mitigation, whatever form that mitigation may take.

The fertiliser industry sees itself as a provider of solutions, not all the solutions, but some. We recognise that the nutrient losses from farming can, if poorly managed and without appropriate mitigation, end up in rivers and lakes, and eventually, our estuaries. A major focus of our work has been about supporting pastoral and arable farming to move towards precision practices where the use of nutrients (from fertiliser and other sources) is carefully calibrated and managed to avoid adverse effects. Major initiatives have included:

- The development of OVERSEER®
- Research
- The promotion of nutrient budgeting
- The development of a code of practice for nutrient management
- The development of the Nutrient Management Adviser Certification Programme with DairyNZ
- Support of long-term fertiliser trials
- Soil testing
- And, most importantly, the delivery of farm advice.

Our emphasis has been on careful use of nutrients and better environmentally protective practices to turn around negative water quality trends.

The reality is that water quality is impacted by different factors in every catchment – climate, weather, topography, hydrology, soil types, physical disturbance and land use. There are lag times on the impact of nutrients of up to 40 years in some places and less than a year in others. The approach to managing nutrients has to be systematic and evidence-based, promoting practices that ensure sustainable and economically viable use of fertiliser and other nutrient sources, as well as supporting farmers and growers to achieve their production and environmental goals for nutrient management.

A sense of doubt emerges in the community when work to improve water quality does not immediately reverse trends of continued deterioration, or if the results are variable. Are our strategies right? Are they sufficiently rapid? We in the primary sector need first and foremost to keep our focus, to keep investing in the development of tools, skills and practices related to nutrient management and ensure that these assets are used widely, so that good practice becomes universal. Then, albeit gradually, we will see results for our effort.

The very real danger is that the quest for improved water quality turns from a collaborative based exercise as at present, to a blaming and conflict situation with a loss of trust, heightened tension and loss of focus on the main game. Delivering improved water quality needs us all working together to ensure it is protected.
EDITORIAL

Dr Vera Power joined the Association as its Chief Executive in February 2017, after having worked for the Ministry for the Environment on both water and climate change issues. Dr Power brings international experience in farm based research and regulation.

Time to shift public conversation to workable solutions

Over the last twelve months, a number of reports that touch on water quality or respond to climate change have been released by government and international agencies. All the reports highlight the environmental and economic impacts of the way land is used in New Zealand and consider the choices that will shape our future.

In addition to the recent report “Stepping stones to farms and beyond” last October, the Parliamentary Commissioner for the Environment released a report specifically on agricultural greenhouse gases. The Commissioner emphasises that while the world will continue to need food, the way in which food is grown will change if biological emissions are to be reduced. The emissions intensity of milk and meat production in New Zealand is low compared with other countries, but what will be the future opportunities for New Zealand to reduce or offset our total emissions? Will we have cows that are vaccinated against producing greenhouse gases, or super pine trees that soak up huge amounts of carbon?

What we do know is that some actions taken to reduce nitrate leaching into waterways will also reduce nitrous oxide from pastures. In February, Government released the latest set of proposals on water reform – Clean Water. The proposals start to articulate a unique kiwi perspective on water quality covering Te Mana o Te Wai, swimming, fencing and continued refinement of the National Objectives Framework.

We received international perspectives in March when the OECD environmental performance review of New Zealand and a report by Vivid Economics on future scenarios for greenhouse house gas reduction were both released.

The OECD conducts environmental performance reviews of member countries approximately once every ten years. The recent report includes responses to climate change and water resource management. Not surprising for the OECD, it calls on a regulatory or pricing response. It also points out the need to think about water, climate and primary industry policies in a coherent way.

The study from Vivid Economics is unusual as it was commissioned by a group of MP’s drawn from across Parliament. The report considers what food production could look like in a low greenhouse gas emissions world, and argues that a predictable emissions price is vital in encouraging investments in a low-emissions future, including how we manage land.

The Prime Minister’s Chief Science Adviser (Sir Peter Gluckman) released a report in April on water quality. He identified pressures on fresh water arising from land use (both rural and urban), energy generation, pest invasion and, increasingly, climate change. The report points to the increasing stress on our freshwater systems with a mix of negative and positive trends in water quality. A similar story is told in the most recent national state of environment report – ‘Our Freshwater 2017’.

It is a complex and often confusing picture. Improvements in water quality are happening at some sites, deteriorations at others. In some areas there are glimmers of hope as restoration activities kick in. Perhaps the work by many landowners and community groups are beginning to make a difference? Is there something we can learn from their experience? What will the journey look like if we also consider mitigations of greenhouse gas emissions?

Can the changes required make economic sense?

The reports make it clear that our responses to climate and water issues will be challenging. We need to think about what lives in our water ways and where we wish to swim. We need to think about nutrient enrichment, sediment and habitat change. We need to think about greenhouse gases. We need to think about how we produce food and how we maintain strong and resilient communities. How can we have a high level of productivity from our land, and manage the issues which are the consequence?

While the response may be challenging, there are tools already available that can make a difference. Land management practices are already happening that will deliver significantly better outcomes. Yes, there is some uncertainty about what food production will look like in twenty years’ time, but perhaps that challenge also brings opportunity?
New information book released

NEW FORAGE CROPPING BOOKLET NOW AVAILABLE

The Fertiliser Association has a series of guides to fertiliser management on its website. These are designed to provide practical, easy to read information, relevant to New Zealand farms. A new addition to this series is a booklet on Fertiliser Use on New Zealand Forage Crops which has recently been uploaded to the website: www.fertiliser.org.nz. You can get a printed version by contacting the Association.

The New Zealand pastoral industry has been developed on low-cost grazing systems, predominantly based on perennial ryegrass and white clover to meet livestock nutrient and energy demands. In recent years, there has been a rapidly growing trend within the New Zealand pastoral industry towards mixed farming systems. The use of fodder crops has helped to supplement periods of seasonal deficits in pasture production, and in-turn, improved utilisation of available feed during periods of maximum pasture production. While fodder crops have always been utilised by New Zealand farmers, the traditional brassica crops are being supplemented by crops such as lucerne, chicory and plantain.

This new booklet provides information on soil groups, assessment of soil fertility status, principles of crop nutrition, advice on seedling establishment and choice of fertiliser product type and rates.

Animal health and environmental considerations are also key components of successful forage crop management. This booklet recognises the need to consider environmental impacts when growing forage crops. On grazed forage crop sites, there is increased risk of soil disturbance and potential for losses of nutrients, sediment and pathogens. The booklet provides information on management practices and mitigations to minimise these losses.

For grazing management of forages, good information can also be found at:

- DairyNZ www.dairynz.co.nz/media/5787285/reducing_surface_runoff.pdf
- Foundation for Arable Research https://www.far.org.nz/research/farm_systems/forage_systems/overview

Farmers will get the best benefit from this booklet by combining the information in this booklet with their own experience, and calling on the help of a certified nutrient management adviser (www.nmacertification.org.nz) or other qualified consultant to develop a soil fertility programme tailored to their particular goals and circumstances.

FERTILISER USE BOOKLETS FOR NZ SHEEP AND BEEF FARMS AND NZ DAIRY FARMS

The Fertiliser Association has also released updated versions of the information booklets: “Fertiliser Use on New Zealand Sheep and Beef Farms” and “Fertiliser Use on New Zealand Dairy Farms”. The booklets were originally drafted in 1994 and have had three full revisions since they were first published. They provide a comprehensive guide on nutrient management, taking into account soil fertility and fertiliser research.

These booklets provide farmers with key information relating to soils, essential elements in plants and animals, balancing productivity, sustainability and environmental inputs, Nutrient Management Plans, Nutrient Budgets, development of the OVERSEER® Nutrient Budget Model, Spreadmark and Fertmark, environmental impacts of fertiliser use, loss of phosphate from land to water, soil fertility practice on pastoral farm, assessing soil nutrient status, raising and maintaining soil fertility status, timing of fertiliser application, monitoring, pasture analysis, trace element deficiencies, and information regarding the forms and types of fertiliser for pasture.

The booklets can be downloaded from the Fertiliser Association’s website: www.fertiliser.org.nz
Positive results from NMACP survey will guide programme’s future

The NMACP have recently undertaken a survey as part of a review of the programme to get feedback from its advisers as to what the programme does well, what could be improved, and to hear views from advisers on future development and direction of the programme.

We had a great response to the survey, with over 60 per cent of advisers responding. Oliver Knowles, Science Extension Precision Agricultural Specialist with Ballance Agri-Nutrients (covering the Bay of Plenty, Waikato and Canterbury) won the $100 Mitre 10 voucher offered as a prize for completing the survey. Thank you to all who participated.

The results from the review will be reported back in the next issue of Fertiliser Matters.

QUEEN’S SERVICE MEDAL AWARDED TO KEVIN GEDDES

Fertiliser Matters would like to acknowledge Kevin Geddes, Senior Policy Adviser, Federated Farmers, who was awarded a Queen’s Service Medal for his services to agriculture and the community earlier this year.

Kevin has dedicated 26 years of service to Federated Farmers, and during that time he made a significant contribution to the fertiliser industry as Chief Executive of the Fertiliser Quality Council between 2000 and 2014. In this role, Kevin was instrumental in a range of initiatives, including development and delivery of The Code of Practice for the Sale of Fertiliser in New Zealand (Fertmark) and The Code of Practice for Placement of Fertiliser (Spreadmark), not to mention his contributions at the helm of the Groundspread Fertilisers’ Association also during this time. Congratulations Kevin.

EVENTS

NZ Association of Resource Management Conference
10–12 October, Invercargill

This conference is “…an opportunity for members from across New Zealand to come together to learn, share experience and network with other members. The theme of this year’s conference is: ‘Managing soil and water interaction through people and science’. For more information, or to register for the conference, visit: http://nzarm.org.nz/events/conferences/conference-2017-details.

NZ Grassland Association Conference
9 November, Whanganui

The Annual NZ Grassland Association conference will be held in Whanganui for two days in November 2017. This year’s theme is “A River runs through it”. For more information, visit: https://www.grassland.org.nz/events.php.