

From: [Terry Huggins](#)
To: [Mailroom Mailbox](#)
Subject: Plan Change considerations
Date: Wednesday, 28 August 2019 10:18:04 AM
Attachments:

Hello,

I can't comment on provisions in Plan Change 7 or 2. The restrictions in nitrate pollution are not the elephant in the room. Farmers around the world are struggling against the forces of increasing adverse weather events as climate change takes over life on Earth. In Germany this summer farmers were without pasture and feeding hay. In Australia parts of NSW are like a barren moon surface.

The only possible solution to farming in Canterbury and in the Central Plains irrigation scheme is a radical reduction in irrigation and the elimination of all topdressing with synthetic nitrogen. Landcorp saw the writing on the wall and has made the necessary change to sustainable farming. This is the only way to protect our water and our ecosystems, all else fails.

Find attached a submission slightly revised for Environment Canterbury.

Regards

Terry Huggins

CLIMATE CHANGE ZERO CARBON BILL

The five percent contribution by farmers to the ETS proposed under the Climate Change Response 'Zero Carbon' Bill, becoming liable in 2025, will leave farmers feeling secure, and not needing to consider radical changes to their farming methods in the meantime. However this reprieve will have them looking at the wrong future threat. Attention should be turned to the current heat wave spreading across Europe and its effects on farming on the continent under plus forty degree heat conditions. In Australia severe droughts have laid large areas of farmland bare, dairy farming is in sharp decline, as well as loss in wheat and olive production.

Complacency will kill farming here in New Zealand. Climate change cannot be taken lightly.

Ten years ago the National Government had a predilection towards water policies that favoured farming and the intensive methods adopted sixty years earlier. The use of chemical fertilizer snowballed gradually and became a means to maximize production at the expense of water quality and the environment. Realising the growing deterioration of groundwater and ecosystems, government eventually tried to cut back the rate of damage, but hasn't yet succeeded in slowing the destructive impacts of intensive farming.

In addition to groundwater and environment consideration, is the challenge that more extreme heat and violent weather events will bring. Modern fast growing rye grasses used in pastures require constant nitrogen applications and watering to maintain them. In addition, trees and shelter belts have been removed to allow more freedom for irrigators.

The advent of increasing climate change will require more advanced techniques for pasture. Experts trained in farming methods adopted over recent decades will need to change their mindset to create new and original farming policies that will cater both for climate change, and protect water quality, and the

environment. Farming failures are going to escalate as they have already in Australia.

Carbon emissions from around the world are still increasing rapidly. Climate change events everywhere are indicating that the warming effect is deepening exponentially. This means two things for New Zealand: that we need to reduce emissions rapidly, and secondly we need to prepare for the escalation in adverse weather events that will challenge our future. Nowhere is it more important to adapt swiftly than in farming. Nowhere is it more important than in protecting our water supplies and protecting our ecosystems. Farming depends on the insect life and biological inputs from nature.

Thinking that action can be carried out by 2050 is nonsense because it is what happens during the next few years that will define our future. Our school children who marched in protest at the lack of action know that their future will be impacted by what we do now.

In Australia, large areas of their farm lands have been devastated by extreme heat and drought. They have been woefully unprepared. Hand-outs from government do not solve the problem of farming in adverse conditions. In some tropical countries extraordinary efforts are being made to create growing microclimates that are sustaining the ability to grow crops and vegetables. A number of nations have reverted to new organic methods of growing rice with huge success and increased profitability. We have to face that reality now.

Pastoral farmers need to revert to perennial pastures using grass mixtures, as well as adding clover and Lucerne. Regenerative uses of plant mixtures add to soil fertility over time. In India where they are used to hot dry conditions they grow chickpea in their pastures.

Abandoning topdressing with nitrogen and changing to more durable pasture mixtures will reduce the need for irrigation which in turn will reduce runoff. It is particularly important to abandon topdressing on market gardens as the bare soil between rows

creates excessive runoff carrying nitrogen and soil into nearby groundwater.

The dairy industry will of necessity need to reduce stock levels by 15% or a little more. Smaller herds will be easier to manage in extreme weather conditions. The way forward for dairy is to concentrate on producing value added organic milk protein.

Abandoning industrial sprays will also protect our ecosystems, insects, and bird life, all valuable to farming.

The above recommended changes in farming methods are not only to reduce agricultural emissions and mitigate nutrient pollution, but are principally designed to fortify farming to cope with challenging weather conditions. Much research and use of more organic farming techniques are covered in books of which 'Growing a Revolution' by David R. Montgomery is one example. The Rodale Institute in America has been researching the benefits of organic farming methods in comparison with conventional fertilizer-based methods for several decades. Organic farm methods have proven to be superior. In New Zealand, government owned Landcorp has already made the transition to organic dairy and meat production.

Hotter, drier windier weather events are going to come, and will come soon. Farmers in dry areas should consider restoring or planting significant shelter belts, and use narrow belts of trees to break down wind velocity.

Don't look to hand-outs when things go wrong and you haven't taken any action to prepare for the future.

From: [Terry Huggins](#)
To: [Plan Hearings](#)
Subject: Submission
Date: Wednesday, 4 September 2019 3:15:23 PM

Hello,

My paper and letter to you was in part taken from a submission to government. I am all for farming in New Zealand. Much misinformation has been spread by the farming lobby group, Federated Farmers and Fertilizer Companies and farm advisors. They released their best practice farm strategy three years ago which changed very little and those recommendations were to suit corporate farming organizations.

The average farmer does not know what to expect as climate change takes over and has had little sound advice. My paper outlines what they need to know and the best strategy for farmers and the environment in the future. Landcorp, Pamu, has already confronted the necessary change. Make it clear: most nitrate pollution in groundwater comes from the practice of topdressing with nitrogen fertilizer followed by irrigation. The highest nitrate runoff comes from market gardening, Dr. Jan Wright, no animals involved.

In my eighties I have no benefit from what I advocate only the future of our nation. No topdressing should be allowed within 30 kilometres of the Waimakariri River or in the Central Plains Scheme. Drill fertilizer into the soil when planting only. Better still go organic regenerative farming.

Terry Huggins