

25 October 2016

The Chairman
Hearing Panel
Plan Change 10
Lake Rotorua Nutrient Management

Dear Sir,

I am submitter number 90 on this matter.

I have read the letter from the Lake Rotorua Primary Producers Collective ("the Collective") seeking to defer the public hearing.

I oppose that request on the grounds set out below;

Regulation of nutrient discharge from agriculture land is a matter of national importance, requiring urgent action if New Zealand is to improve its water quality, re-establish its "clean / green" image, and contribute to the reduction in global warming.

New Zealand has signed the Paris accord on climate change and has committed to reduce greenhouse gas emissions. Reducing nitrous oxide gas emissions from agriculture land is one of the steps it can take.

There is clear evidence that without regulations, lower nutrient discharge limits proposed under Plan Change 10 will not be met by farmers in the catchment on a voluntary basis.

In 2011, a four year research programme titled "Meeting Nutrient Load Targets on Dairy Farms in the Lake Rotorua Catchment" was commenced and overseen by a group of interested parties including DairyNZ and AgResearch.

In 2014, the group's report on this project concluded among other things that;

"any significant changes over and above the efficiencies already undertaken to date by catchment farmers would require a shift in the regulatory environment and/or provision of incentives".
(www.massey.ac.nz/~firs/workshops/14/manuscripts/Paper_Park_2014)

I have personal experience in the field that supports this statement, from numerous meetings with farmers and growers in New Zealand, and several East European countries, They all understand the damage to soil fertility created by the use of chemical fertilizer, but the vast majority are very reluctant to change their established practices on a voluntary basis.

Various restrictions on the use of chemical fertilizers and pesticides are now being introduced by member states of the EU.

Conventional science in New Zealand still assumes that the only effective way to grow pasture and food crops is to use chemical fertilizers and pesticides.

This is primarily driven by chemical fertilizer companies, which are co-operatives owned by farmers. Both have vested financial interests in ensuring that chemical fertilizers continue to be the main source of nutrients for growing grass and crops.

However, there are contrary views held by many well informed soil scientists and academics, pasture management companies and farmers.

Organic production is increasing steadily, and there are new products now available in New Zealand that can substitute for NPK.

Adoption of the new technology by farmers will significantly reduce the rate of chemical nitrates and phosphorous leaching from farm land in run-off water.

Farmers in the Catchment who are likely to be adversely affected by the proposed regulations now have the option of changing their present fertilizer practices by adopting the new technology.

My submissions refer to one of the new poly-microbial technologies known as Sumagrow, which is now available in New Zealand under the trade name of "StandUp".

The benefits of Sumagrow are well documented by soil scientists at several universities in the USA, various independent research organizations and commercial users. The technology is being adopted increasingly by farmers and growers in many countries, worldwide.

StandUp is organic, and authorized for use in New Zealand by MPI, It is but one of a number number of similar products being used in Europe where I am currently working, and where a lot of research continues to take place.

The acceptance and use of bio-fertilizers face the same fundamental challenge worldwide; being the control exercised by the chemical fertilizer industry over farmers and its influence with politicians.

There is much at stake, but it is clear that we are on the cusp of a global change in the way agriculture land will be fertilized in future. Inevitably there will be a gradual increase in the use of microbial technology at the expense of chemical fertilizers and pesticides.

This must happen if global agriculture is to produce sufficient food sustainably to feed the projected population, and maintain an adequate supply of water.

The essential change process will only speed-up through enforcement of regulations, which process is happening in Europe now, and must follow in New Zealand.

The Collective has been informed about Sumagrow technology, having been provided with a copy of my submission, as has Federated Farmers, and the Ministers for the Environment and Primary Industries.

Intensive dairy farms are a special case in that cow urine dropped onto pasture also contains high levels of nitrogen, which is a significant contributor to the total volume of nitrates leached from the land.

However, this too will reduce when StandUp is used to fertilize pasture, in conjunction with feed supplements that remove nitrates from urine.

Farmers in the Collective have been offered an opportunity to conduct trials with StandUp, and those who take up the offer will gain an immediate benefit of reduced nitrate leaching from their land.

Technical support is also available from the US manufacturer of Sumagrow and its research team at the University of Southern Mississippi.

Based on my considerable experience working with Sumagrow in Europe and its use in the USA on pasture in particular, I believe the target reduction of nitrogen entering Lake Rotorua can be achieved without farmers having to change their current land use, or be concerned about lower future incomes or loss in capital value of their properties.

This being the case, Government will not have to spend \$40 million of public money already allocated to assist farmers meet the proposed low nitrogen discharge limits or change their land use.

Only political intervention with regulations will control the future use of chemical fertilizers, as was proven to be necessary to control the tobacco industry and influence consumers to reduce smoking.

Yours faithfully

C R Hook

Director
Farmorganix Europe S.R.L..
Bucharest
Romania

PS: I am currently in Europe but will return to New Zealand for the hearing at which I have asked to be heard, and also plan to introduce expert evidence in support of my submissions.