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CHATHAM ROCK PHOSPHATE – A SOLUTION TO FRESHWATER QUALITY

WELLINGTON New Zealand – Chatham Rock Phosphate Limited (TSXV: “NZP” and NZAX: “CRP” or the “Company”) says the government’s discussion on freshwater quality is the perfect opportunity to recognise the merits of a local organic source of fertiliser with an inherent ability to reduce sediment run off into waterways.

Last week the Ministry for the Environment and the Ministry for Primary Industries released a discussion document concerning the declining freshwater quality in New Zealand and the remedial action proposed to be undertaken to reverse this disturbing trend. Its aims to:

1. Stop further degradation of freshwater resources and start making immediate improvements so water quality is materially improving within five years.
2. Reverse past damage to bring freshwater resources, waterways and ecosystems to a healthy state within a generation.

Among the proposals are measures aimed at reducing run-off from farming and horticultural activities into streams and rivers. These include a proposed limit on conversion to dairy farms, stricter limits on farming near waterways, and lower thresholds of phosphates and nitrates in rivers and streams. These proposals have alarmed the farming industry concerned at the impacts on farm viability, export returns and rural communities.

“Fertiliser runoff into waterways is an issue Chatham Rock Phosphate has highlighted for several years, as we have a proven, very effective solution to the problem,” Chief Executive Chris Castle said.

“In 2012 our briefing notes to the then Minister for the Environment said: when applied directly Chatham Rise rock phosphate, as a reactive rock phosphate (RPR) is both a highly effective sustained release fertiliser and resistant to leaching. It offers the solution to run-off into waterways.”

The findings of the studies are supported by Dr Bert Quin, probably New Zealand’s pre-eminent expert on the use of rock phosphate fertiliser, who first conducted extensive field trials while working as a scientist for government agencies during the 1980s.

Dr Quin believes nutrients continue to enter waterways from agricultural land, simply because of the type of fertilisers we use. He says the biggest problem with superphosphate, the traditional fertiliser type used in New Zealand - which supplies phosphorus (P) and sulphur (S), and urea for nitrogen (N) - , is that it is ‘leaky’.

“Super is prone to run-off of applied phosphorus into waterways in the weeks after application, leaching into shallow sub-surface drains and water bodies on dairy farms, and being leached right through soils with low phosphorus retention such as those in Northland and the West Coast. Urea is prone to volatilisation (evaporation) losses as ammonia gas to the atmosphere, nitrate leaching and nitrous oxide GHG emission.

“By far the most cost-effective option for phosphorus is reactive phosphate rock or ‘RPR’. It

is a natural mineral, which is a very effective source of sustained-release phosphorus, ideal for maintaining high-producing pasture and extremely resistant to leaching.”

Chatham holds New Zealand’s main local source. The company has a mining permit and is proposing to apply for an environmental consent.

Dr Quin estimates switching from super phosphate to RPR and RPR/DAP (diamonium phosphate) blends would reduce average run-off losses of P into waterways by 80-90%.

“This would take P losses below the trigger levels necessary to keep our lakes in a eutrophied state. In 5-10 years, water quality in the Rotorua lakes, for example, would be massively improved.

“Sulphur requirements are easily met by adding in just the required amount of elemental S, by itself or with a bit of gypsum in dry areas. Like RPR, elemental S is a sustained release fertiliser. The water-soluble sulphate form of S in super is very easily leached from many soils. As this happens, it takes valuable cations such as calcium and magnesium with it.”

Dr Quin said back in 2012: “the time is right for people with the political will and determination to save New Zealand’s environment to stand up and be counted, and force change. “If we do not, we will come to be viewed as the ‘gutless generation’ by our children and grandchildren.”

The release of the discussion document further underlines the major role Chatham Rise sourced rock phosphate can play in ensuring both farm incomes and water quality can be protected at the same time.

In October 2018 Chatham wrote to Ministers Parker and O’Connor pointing out using Chatham Rise rock phosphate offers these significant water quality benefits as well as improved soil health, reduced carbon emissions, minimal cadmium levels, sourcing a significant proportion of our phosphate fertiliser needs from an ethical source, significant export earnings, healthy regional port development revenues and significant annual income tax and royalties.

“These statements are even more relevant a year later. Chatham has the answer to many of the issues New Zealand faces.”

For further information please contact

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