9 March 2022

PROMISING EARLY RESULTS FROM SOIL CARBON AND NUTRIENT RETENTION TRIALS

Emerging mineral processing technology company, Zeotech Limited (ASX: ZEO, "Zeotech" or "the Company") is pleased to advise that it has achieved promising early-stage results from pilot-scale trials undertaken by Griffith University ("Griffith"). The trials were undertaken over a three-month period and completed in February 2022.

The encouraging results highlight the potential to sequester long-term soil carbon and endorse the Company's comprehensive dual stream research program in collaboration with Griffith. The aim of the program is to establish scientific validation for developing Zeotech products for applications in two high potential areas of carbon markets and agricultural nutrient management.

HIGHLIGHTS

- Treatments containing Zeotech products consistently exhibited higher organic matter/carbon contents than controls for all soil and organic amendment conditions.
- The effectiveness of Zeotech products at protecting against organic matter/carbon loss was much higher than that of the natural minerals (natural zeolite and bentonite).
- All materials exhibited high nutrient carrying capacity approaching 10% by weight. This is particularly promising for Zeotech products and expands potential for a competitive fertiliser delivery platform.
- Nitrogen carrying capacity was observed at approximately two times greater, and phosphorous up to five times greater in Zeotech products when compared to natural zeolites and bentonites.
- Desorption results indicate that a small proportion of the zeolite-held nutrients are immediately available to plants. This highlights the potential for a controlled (slow release) delivery of nutrients to plants in the soil environment.

Griffith University, School of Environment and Science | Australian Rivers Institute, Dr. Chris Pratt commented:

"Achieving organic soil carbon protection levels averaging 25% compared with controls, combined with high nutrient carrying capacity and slow-release potential are exciting early findings.

The results increase confidence in achieving desired outcomes in the comprehensive program underway at Griffith, aimed at research targeting the development Zeotech products for improved fertilizer delivery and enhanced soil carbon retention."

Zeotech, Managing Director Peter Zardo added:

"These promising results will inform the design of larger trials that will commence within weeks and further validate Zeotech's commitment to developing solutions to enhance sustainable farm productivity and expand carbon market opportunities for the agricultural sector.

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The Company is continuing process development aimed at producing a lower cost Type A zeolite, specifically designed for agricultural applications, with samples having already been produced and ready to be used in the comprehensive dual-stream research program.

Zeotech values the collaboration with Griffith University, one of Australia's most highly specialised and well-resourced teams in the area of agricultural carbon and nutrient management and acknowledges the efforts of Griffith summer student's Renee Medland (carbon retention) and Mark Donaldson (nutrient retention/interception) in supporting Dr. Pratt during the successful early pilot-scale trials."

Griffith University Research Trials

The experimental trials were targeted at:

- **Soil organic carbon sequestration** – evaluating the capacity of the synthetic zeolites produced under the Company's proprietary process to protect organic carbon amendments; and
- **Nutrient interception and retention** – evaluating the nutrient carrying capacity of synthetic zeolites produced under Zeotech's proprietary process and competitiveness with conventional chemical fertiliser products, together with plant availability of zeolite-held nutrients.

The encouraging outcomes will inform the design of the larger trials, scheduled to commence in the coming weeks. Establishing the form and stability of this protected organic matter/carbon is a key step in evaluating the potential for the Company's synthetic zeolite product(s) to sequester long-term stable soil carbon.

Early research outcomes validate the potential for Zeotech products in carbon markets, which are being developed in Griffith's dual-stream program that commenced in November 2021[1].

Soil Organic Carbon Sequestration

The research comprised a total of individual treatments covering two soil types, two organic soil inputs, and four carbon protection minerals. Results were benchmarked against controls containing soil only and organic compound only.

Following the three-month trial, the organic carbon content of each treatment was determined by the 'loss on ignition method.'

[fig1] Set-up of the treatment incubations prior to mixing

[1] ASX release 08/11/2021 "Zeotech to develop products for Carbon Markets in collaboration with Griffith University"

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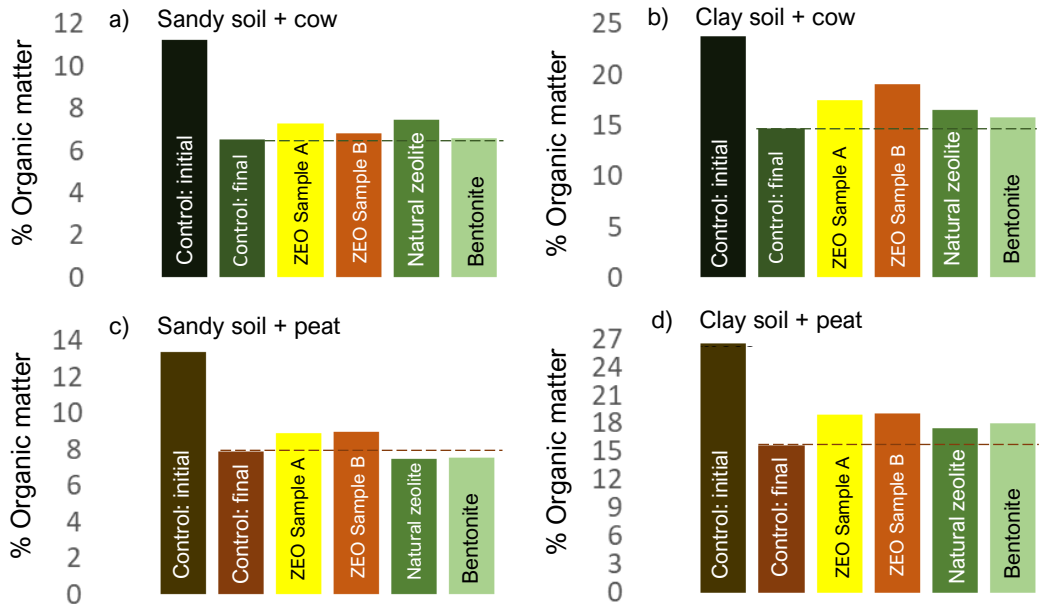
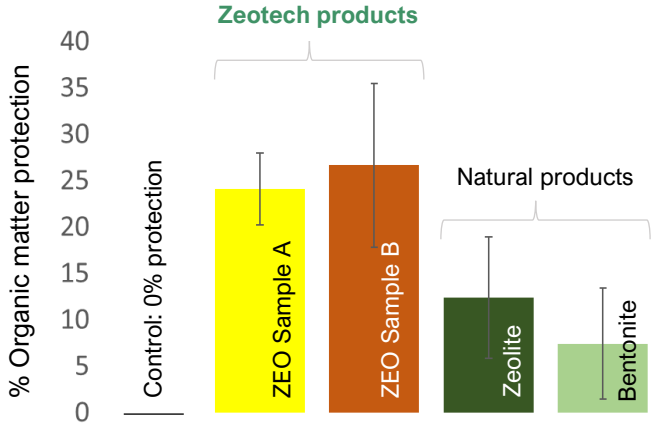


[fig2] Organic matter (OM) remaining in treatments at end of trial with
OM content of control: initial and control: final shown for comparison description.

Treatments containing Zeotech products consistently exhibited higher organic matter/carbon contents than the controls for all soil and organic amendment conditions. The naturally occurring materials (natural zeolite and bentonite) exhibited higher organic matter contents than the controls for all soil and organic amendment additions apart from peat moss added to the sandy soil.



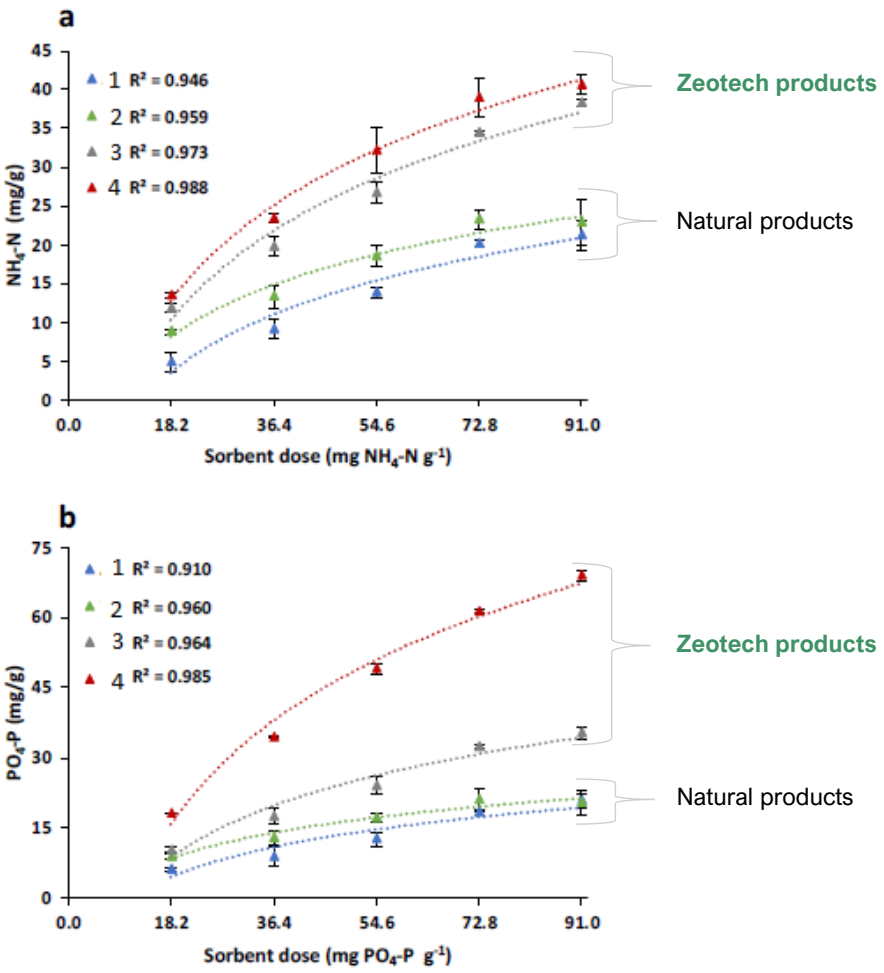
[fig3] Organic matter (OM) protection by treatment, expressed as a % of OM retained relative to OM lost by controls

The results highlight the effectiveness of Zeotech's products at protecting against organic matter/carbon loss was much higher than that of the natural minerals (natural zeolite and bentonite) [fig3] shows the organic matter/carbon protection by mineral treatments, expressed as a percentage of the organic matter/carbon retained relative to the organic matter/carbon lost by the controls (where the controls equal 0%).

Nutrient Interception and Retention

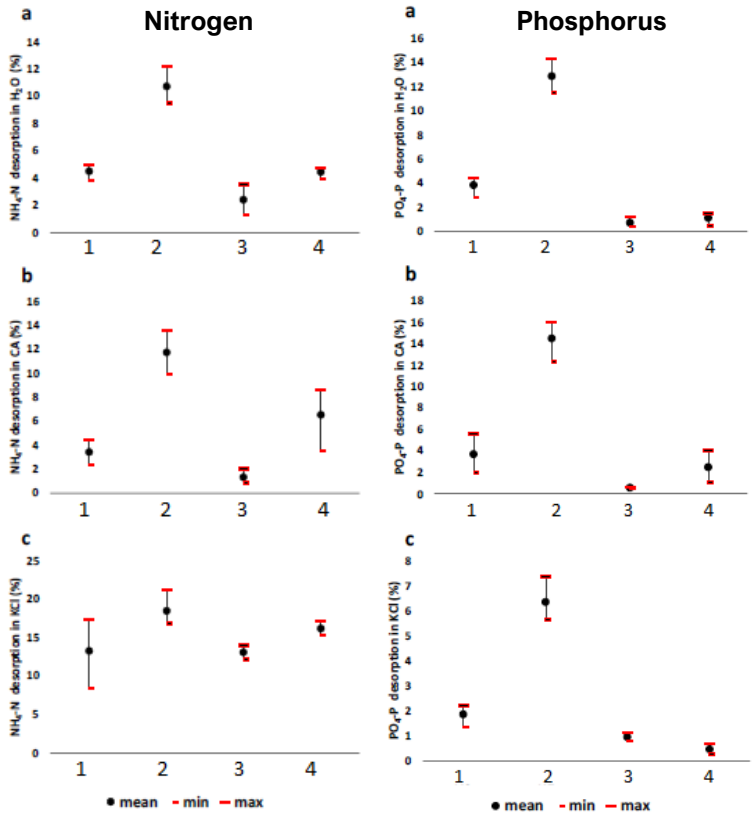
The research incorporated Zeotech products in bead and powder form, as well as two natural zeolites (clinoptilolite and mordenite). Doses of phosphorous and nitrogen solution were sequentially added to the batches.

Upon completion of the dosing and air-drying phase, the samples underwent a desorption process using deionised H_2O (general solvent), citric acid (targets phosphate minerals) and potassium chloride (targets surface-sorbed nitrogen compounds). This step was conducted to evaluate the retention stability of the nutrients on the zeolite material.



[fig4] (a) ammonium-N and (b) phosphate-P retention capacities of the zeolites across multiple dosing events.

All materials exhibited high nutrient carrying capacity, approaching 10% by weight for the Zeotech products, which was reflected by increased material masses following drying after the nutrient dosage stage. Nitrogen retention capacity is approximately two times greater in the Zeotech products and held up to five times more phosphorous than natural zeolites.



[fig5] Desorption results for ammonium-N and phosphate-P for each of the desorption agents: a (H_2O), b (citric acid) and c (KCl). 1 = natural clinoptilolite zeolite, 2 = natural mordenite zeolite, 3 = Zeotech Type A beads, 4 = Zeotech Type A powder.

Nutrient desorption (release) results are represented as a percentage of nutrient released relative to the amount of nutrient retained in the loading phase. Nutrient release in the one-off desorption solutions were generally low (<20%) and are more favourable for the Zeotech products when compared to the natural zeolites. Desorption results indicate that a small proportion of the zeolite-held nutrients are immediately available to the plants. This holds promise for controlled (slow release) delivery of nutrients to plants in the soil environment.

Comprehensive Dual-Stream Agri-Product Research Program

Zeotech commenced a comprehensive dual-stream research program in collaboration with Griffith University in November 2021[2]. The research program involves pilot trials and establishing scientific validation aimed at developing Zeotech product applications in two high potential areas of carbon markets and agricultural nutrient management.

The goal of the program being undertaken by Griffith is to conduct research that will underpin agronomic opportunities for Zeotech products that provide competitive advantages comparable to existing soil amendments such as fertilisers and soil conditioners, with the early and substantial focus on the 'carbon markets' program.

[2] ASX release 08/11/2021 "Zeotech to develop products for Carbon Markets in collaboration with Griffith University

Griffith's comprehensive trials will run concurrently and comprise of two streams of agricultural product development:

- **Zeotech Products for Carbon Markets** - Enhanced soil carbon storage and climate change mitigation in agricultural landscapes, targeting a substantial share of the carbon mitigation market – an estimated 15-20% of total human greenhouse gas emissions; and
- **Zeotech Products to Improve Agricultural Nutrient Management** - Agricultural pollutant interception, removal, and recycling.

Zeolites offer soil carbon sequestration potential

Early promising results from pilot-scale trials completed in February 2022 support previous research undertaken by Griffith that indicated potential for the surfaces of reactive zeolites to be effective for carbon sequestration, for both organic and inorganic phases. Further, the mechanisms underpinning these sequestration processes suggest positive prospects for long-term soil carbon storage.

The program is supported by promising results achieved during previous agronomic studies[3] undertaken by Griffith, which highlighted that synthetic zeolites were capable of high nutrient retention, pesticide removal, enhanced moisture retention and decreased soil acidification.

Zeotech's aim is to leverage the economic benefits of its proprietary mineral processing technology for the low-cost synthesis of zeolites to develop products that help agronomic systems cope with widespread existing and emerging challenges, including fertiliser resource scarcity and increasingly difficult growing conditions wrought by changing climates.

This announcement has been approved by the Board.

- End -

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[3] Refer to ASX announcement 28/09/2020 "Exploring Agricultural Applications for Synthetic Zeolites"

About Griffith University

Ranking in the top 2% of universities worldwide, Griffith has come to be regarded as one of Australia's most innovative tertiary institutions and one of the most influential universities in the Asia-Pacific region.

Australian Rivers Institute

The Australian Rivers Institute (ARI) is a multi-disciplinary research institute leading significant national and international research programs across land and water under its 'Catchment to Coast' mandate. ARI was established in 2006 and is now Australia's pre-eminent and largest university-based land and water research institution, with over 150 research staff and post-graduate students, including eleven professors.

ARI has established a record of delivering high quality, collaborative research, building Griffith's profile of expertise and capability in environmental, water and soil sciences, and underpinning the university's reputation as a research performer with capability to address issues of global and national significance.

ARI's research outputs underpinned the University's 'Well above world standard' rankings for Environmental sciences, Ecological applications, Environmental science and management and Ecology, and 'Above world standard' ranking for the Soil sciences and Physical geography in the 2018-19 ERA (Excellence in Research for Australia) assessment. It positions Griffith as the top freshwater and catchment sciences research institution in Australia and in the top 30 in the world.

Soils and Land Use Team

Griffith University's Soil and Land Use team is one of Australia's most highly specialised and well-resourced teams in the area of agricultural carbon and nutrient management. Access to the team's state- of-the art analysis suite – which includes a carbon fractionation analyser, a carbon greenhouse gas chromatograph and a soil microbial community detector – along with the team's unique skill sets in applied environmental processes, offers Zeotech a genuine opportunity to pursue a high-value work program in partnership with Griffith.

The group comprises expertise spanning multiple high-level themes, including Climate Change Mitigation and Adaptation, Sustainable Fertiliser Development, and Soil Waste Management. The team has led and managed a diverse range of similar large-scale research programs, often in the form of integrated industry-government-community funding structures, working with partners including: the Australian Centre for Agricultural Research, Farmlink, the Australian Livestock Industries Partnership, the Grains Research and Development Corporation and the Department for Agriculture, Water and the Environment. With an extensive range of outputs generated from these programs – including publications in high-ranking journals, contributions to national greenhouse gas inventory accounting, and development of best-practice guidance documents for primary producers – our Soil and Land Use team is uniquely-positioned to undertake and lead the opportunities identified in the proposed works.

Environmental Engineering group

Griffith University's Environmental Engineering group is one of Australia's most established practicing teams in its field.

With a strong emphasis on developing realistic solutions to meet industry-government needs, the group's expertise in nutrient waste management and recycling, as well as materials science, will be invaluable in transitioning the key underlying science identified in the proposed works into practical approaches that are able to be deployed at field-scale.

About Zeotech

Zeotech Limited (ASX: ZEO) is a team of dedicated people, working together to build a future focused company, leveraging proprietary technology for the low-cost production of advanced materials 'synthetic zeolites' to deliver solutions aimed at addressing sustainability challenges.

About Zeolites

Synthetic zeolites are manufactured aluminosilicate minerals with a sponge-like structure, made up of tiny pores (frameworks) that make them useful as catalysts or ultrafine filters. They are commonly known as molecular sieves and can be designed to selectively adsorb molecules or ions dependant on their unique construction.

Zeolites play an important role in a cleaner and safer environment.

- zeolites are an effective substitute for harmful phosphates in powder detergent, now banned in many parts of the world because of blue green algae toxicity in waterways;
- as catalysts, zeolites increase process efficiencies = decrease in energy consumption;
- zeolites can act as solid acids and reduce the need for more corrosive liquid acids;
- zeolites adsorbent capabilities see them widely used in water treatment i.e., heavy metal removal including those produced by nuclear fission; and
- as redox catalyst sorbents, zeolites can help remove exhaust gases and CFC's.

Forward-looking Statements

This release may contain certain forward-looking statements with respect to matters including but not limited to the financial condition, results of operations and business of Zeotech and certainty of the plans and objectives of Zeotech with respect to these items.

These forward-looking statements are not historical facts but rather are based on Zeotech current expectations, estimates and projections about the industry in which Zeotech operates, and its beliefs and assumptions.

Words such as "anticipates," "expects," "intends," "plans," "believes," "seeks," "estimates", "guidance" and similar expressions are intended to identify forward looking statements and should be considered an at-risk statement.

Such statements are subject to certain risks and uncertainties, particularly those risks or uncertainties inherent in the process of developing technology and in the endeavour of building a business around such products and services.

These statements are not guarantees of future performance and are subject to known and unknown risks, uncertainties, and other factors, some of which are beyond the control of Zeotech, are difficult to predict and could cause actual results to differ materially from those expressed or forecasted in the forward-looking statements.

Zeotech cautions shareholders and prospective shareholders not to place undue reliance on these forward-looking statements, which reflect the view of Zeotech only as of the date of this release. The forward-looking statements made in this announcement relate only to events as of the date on which the statements are made.

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Zeotech will not undertake any obligation to release publicly any revisions or updates to these forward-looking statements to reflect events, circumstances or unanticipated events occurring after the date of this announcement except as required by law or by any appropriate regulatory authority.

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