



2019 PhD Proposal – China Scholarships Council and New Zealand – China Water Research Centre Joint PhD Programme Application

Information to be published on NZ – China Water Centre website if proposal is selected	
Project title	Reducing phosphate losses into water by treating farm dairy effluent before application to land
Supervisors titles and names	Professor Hong J Di, ONZM, FRSNZ Professor Keith Cameron, ONZM, FRSNZ and Dr Rosalind Dodd PhD
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Project outline Please outline the PhD project in 300 words (approx)	Farm dairy effluent (FDE) is a mixture of dung, urine and wash water from the dairy milking shed. It is common practice in New Zealand to irrigate FDE onto dairy pastoral land to recycle the nutrients and dispose of the large volume of liquid effluent. However, recent research has shown that there is a high risk of phosphate being transferred into water when effluent is applied onto shallow free draining soils or onto soil with agricultural drains. Recently new FDE treatment technologies have been developed to recycle the water in FDE and to reduce the risks of water contamination. However, the comparative effect of land applying treated effluent vs untreated FDE on phosphate losses through free draining soils or soils that have artificial drains are unknown at this time. The objectives of this PhD project is therefore to determine the phosphate losses from treated effluent compared with the untreated FDE when applied to land.
References for further reading (optional)	
Please indicate if research operational funding is available to support the project, and if so, the sources of funding.	The operational costs of this project are funded by industry.

