

Collective approaches to reducing nutrient discharge rates into Lake Rotorua

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Dairy farming in the Lake Rotorua catchment contributes around 36 percent of the external nitrogen (N) load to the lake. Nutrient reduction targets set by the Bay of Plenty Regional Council (BOPRC) in its draft Regional Policy Statement (RPS) require a reduction of around 125 tonnes of N per year over a 10-year period. This paper will outline the programme designed and implemented by the Rotorua Pastoral Sector Collective in partnership with AgResearch, DairyNZ, Ballance Agri-nutrients, Federated Farmers, BOPRC, the Maori Trustee and with funding from the MAF Sustainable Farming Fund (SFF) to develop a collective consent for its members to achieve major farm management and system changes to meet these targets.

There are three stages to the programme: (1) establishing field trials on a monitor farm within the catchment to measure biophysical responses to intervention strategies and the spatial mapping of the monitor farm to model management options; (2) using farming systems models (simulation and optimisation) to demonstrate the impacts to farm productivity, profitability and critical environmental indicators (e.g. N leaching, P run-off and reduced greenhouse gas (GHG) emissions) as a result of farm system and management changes; and (3) establishing discussion groups within the catchment to act as 'learning forums' where farmers will meet regularly with each other, scientists and regional council staff to test the efficacy of the intervention strategies.