

# **PROGRESS WITH OPERATING A DURATION CONTROLLED DAIRY GRAZING SYSTEM FOR PRODUCTIVITY GAIN AND FOOTPRINT REDUCTION**

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The New Zealand dairy industry's goals are to increase productivity and profitability whilst decreasing the environmental footprint of dairy farming. Management strategies are required to reduce the inherent elevated losses to surface waters of nitrogen, phosphorus and faecal coliforms that are associated with urine and dung return to intensively grazed pastures. In addition, grazed pasture systems on fine textured soils (clay and silt loams) in regions with wet winter-springs and dry summers need strategies to prevent production losses due to tread-damaged pastures in winter-spring and to drought in summer.

Small plot and farmlet trials have shown that standing cows off pasture to ruminate and rest after grazing (Duration-controlled (DC) grazing) can reduce the treading damage of wet soils and contaminant losses to water. Objective 2 of the National P21 Research Programme is currently evaluating the benefits and operational requirements for practising DC grazing at farm scale. The structural and operational components required to stand cows off pasture to reduce treading damage and contaminant loss to water are being evaluated in a paired farm systems trial under the climate and imperfectly drained soil regimes found on Massey University's No.4 Dairy farm, Manawatu, New Zealand. One 200 cow 'standard' herd (2.67 cows/ha) is managed according to typical regional practices i.e. 40% of cows are grazed off farm in winter and an uncovered concrete feedpad is used to feed maize and pasture silage (supplements constitute approximately 27% of annual diet). The feedpad offers limited capacity in avoiding the treading damage of saturated soils and the reduction of environmental impacts by standing cows off. The second 'housed' herd of 200 cows (2.82 cows/ha) utilises a freestall barn to winter all cows on-farm, and practises DC grazing to reduce excretal load on pastures in summer and autumn, and to reduce treading damage in winter. Both farms have the aim of utilising as much fresh pasture as possible. Supplements are imported as required to fill feed deficits and to feed cows standing off paddocks.

This paper presents a summary of the operational components and management protocols required in the current 2014-2015 lactation season to operate the grazing management, storage and supply of supplementary feed, and effluent generated during stand-off, as well as its "safe", handling, storage and re-application to soils.

**Editor's Note:** A manuscript has not yet been submitted for this presentation.