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ClieNFarms EIP-AGRI Practice Abstracts

Lower footprint farming at the Southern Dairy Hub, New Zealand

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New Zealand dairy systems are characterised by year-round grazing, with Southern systems commonly wintering animals on a forage crop.

The target outcomes of the farm systems' trials at the Southern Dairy Hub in New Zealand are to provide a range of farm system options that meet the future environmental (greenhouse gases and nutrient loss to water), animal welfare, public perception and profitability requirements for New Zealand Southern farmers¹.

The farm systems' trial is funded and led by DairyNZ² and one of the proposed approaches being implemented is to optimise a **lower** intensity farming system with wintering on fodder beet and compare this with a standard intensity system with wintering on fodder beet. The **lower intensity** system has annual N fertiliser use reduced from ~180 kg N/ha to ~50 kg N/ha, and stocking rate reduced from 3 to 2.5 cows/ha, while the target per-cow milk production is increased from ~450 kg milk solids/cow to ~480 kg milk solids/cow.

¹https://www.southerndairyhub.co.nz/site_files/35476/upload_files/blog/SDHMarch2022handout.pdf?dl=1

²<https://www.dairynz.co.nz/>

The hypothesis is that, compared with the standard intensity system, the **lower intensity** system has a lower environmental footprint, while maintaining profitability. To test this hypothesis the following impacts will be assessed: animal performance and welfare, forage production and utilisation, profit, GHG emissions and losses to water.



Figure 1: Photo courtesy of Southern Dairy Hub: <https://www.southerndairyhub.co.nz>

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