PROJECT PART-FUNDED BY THE SUSTAINABLE FARMING FUND

In 2009, the Sustainable Farming Fund invested in a project that aimed to gather information about the performance of pastures comprising a greater range of pasture species.

Ministry for Primary Industries
Manatū Ahu Matua

ASSESSING PERSISTENCE OF MIXED PASTURE

THE ISSUE OR OPPORTUNITY

Productive and resilient pasture is the engine room of pastoral farming – and currently this is generally a mix of ryegrass and clover.

A key aspect of performance is the ability for pasture to persist and resist weed invasion.

In 2009, the Sustainable Farming Fund invested in a project that aimed to gather information about the performance of pastures comprising a greater range of pasture species, including tall fescue, timothy, cocksfoot, herbs such as plantain and chicory, and legumes such as red clover, subclover and lucerne.

A survey of pastures on commercial farms and an experiment at DairyNZ's Hamilton campus were done as part of this project.

The responses of a range of pastures to invasion of weed grasses, yellow bristle grass and summer grass, were examined.

As results have become available, they have been presented for discussion at DairyNZ farmer field days in Waikato, Taranaki and South Auckland, in conjunction with results from other projects on forage herbs and yellow bristle grass.

RESULTS TO DATE

» Botanical surveys of 90 dairy pastures in Taranaki, Bay of Plenty and Waikato in spring were undertaken.

» No evidence was found that increasing diversity of the sown species reduced weed invasion or improved pasture persistence. (This is also the conclusion to date from two years of replicated plots studies in progress at Scott Farm, run by DairyNZ.)

» The type of sown grass species had more influence on weed invasion than the number of species. There were fewer weeds in ryegrass than tall fescue-based pastures, for example.

» Including forage herbs in the mix did not improve persistence of the sown species or reduce weed ingress.

» Tall fescue and tetraploid ryegrass pastures are equally vulnerable to invasion by the harmful C4 summer-active grass weeds, summer grass and yellow bristle grass.

» Further research should focus on improving ryegrass survival over summer, as this is when perennial ryegrass is particularly vulnerable to drought, overgrazing and weed ingress.

AT A GLANCE

SFF project	09/088 Benefits of diverse pasture mixtures – Improving pasture persistence SFF investment: $181 000
Other cash contributors	DairyNZ, Environment Waikato, Environment Bay of Plenty
Total project value (including in-kind contributions): $462 700	

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