



FACT SHEET

JANUARY 2021

DEFERRED GRAZING

This project was initiated by hill country farmers that have used deferred grazing for more than a decade. They could see benefits for both the deferred pastures and for the rest of the farm and wanted to quantify those benefits through a science-led project.

WHAT IS DEFERRED GRAZING?

'Deferred grazing' is a management tool to maintain pasture quality on pastoral farms. It is the practice of resting pastures from grazing from mid-spring until late summer. In the deferred paddocks, perennial ryegrass produces seeds. New tiller buds that form at the base of existing plants remain dormant over summer and develop into new tillers in autumn. The deferred pastures are grazed to low residuals at the end of the deferred period over one or two grazings (e.g. to 1500 kg DM/ha) so that the ryegrass seedlings and new ryegrass tillers have access to light. The previously deferred pastures are treated as renewed pastures and are grazed carefully with light stock for short periods.

HOW DO YOU DEFER A Paddock?



THE PROJECT TEAM DEVELOPED THIS USEFUL CHECKLIST:

- 1 Select 10-15% of farm area - the paddocks most suited to defer. For example, paddocks that need rejuvenating (e.g. ryegrass not performing well) and that fit in with farming operations (e.g. select paddocks that are not a stock corridor).
- 2 Select paddocks that were not deferred in the past couple of years.
- 3 Select paddocks that contain high fertility pasture species (e.g. ryegrass and clover) and that are not overrun with weeds.
- 4 Monitor pasture cover so you know when a surplus is emerging.
- 5 Take the deferred paddocks out of the grazing round from mid-spring when pasture is just starting to send up seed heads until the end of summer after seeds drop. Note - the exact timing of this will differ in different parts of the country.
- 6 Break feed the deferred paddock back into the grazing rotation with cattle or a large mob of ewes. Be aware that pasture utilisation could be as low as 50%.
- 7 Treat these paddocks like new pasture and graze them lightly again prior to winter.
- 8 Consider deferring different paddocks the following spring and repeat the above process.



Primary research field site, Mataiwhetu Station, Lower Kaimai, Bay of Plenty



Over the deferred period, the deferred paddocks will look ugly but do not be put off by this!

FINDINGS FROM THE ON-FARM STUDY

In this study, two paddocks were selected on each of three farms, and each paddock was split into two sections. One section of the paddock was deferred from mid-spring¹ until the end of summer while the other section was rotationally grazed during that period. Timings will depend on the farm and seed drop.

WHEN COMPARING THE DEFERRED TO THE GRAZED SECTIONS:

- **Herbage production** was similar in both sections during the deferred period but higher in the deferred section thereafter.
- **Pasture quality** was lower in the deferred section during the deferred period but it quickly recovered and was similar in both sections thereafter.
- Total **vegetation cover** was higher in the deferred section during and after the deferred period.
- **Weed presence** (particularly Californian thistle) was lower in the deferred section after the deferred period.
- **Soil moisture** was higher in the deferred section towards the end of the deferred period and thereafter.

BENEFITS OF DEFERRED GRAZING

BENEFITS OF DEFERRED GRAZING INCLUDE:

- **Maintaining pasture quality over the whole farm:** By removing some paddocks from the grazing round, the stocking rate is increased over the rest of the farm. As a result, the spring feed surplus is better utilised and pasture quality is maintained.
- **Providing a feed wedge at the end of summer:** This avoids the cost and workload of buying and feeding out supplementary feed. A standing feed wedge available at the end of summer is particularly useful in drought years.
- **Increases pasture persistence:** Resting perennial ryegrass and other species from grazing from mid-spring until late summer enables the desirable species to reseed and produce new plants in the following autumn. New tillers are also produced from the existing plants. This leads to an increase in the tiller density of desirable pasture species and can increase pasture persistence (Figure 1).
- **An increase in clover populations after a long deferred period:** Other research has shown that when deferred pastures are grazed and 'opened up' in late autumn, competition can reduce grass tiller densities, and the content of clover can increase. We did not test the impact of a long (late-autumn opening) deferred period on grass or clover in this study.



Figure 1. Snapshots of a grazed (left) and deferred (right) section of a paddock at Otorohaea, north western Waikato. Photos were taken in May 2019 three months after the deferred period ended.

¹The aim is to remove stock to allow ryegrass to go to seed. This is generally mid-spring but it will depend on the climate and region.



FARMER EXPERIENCE

ALLEN COSTER ON MATAIWHETU STATION

Mataiwhetu Station is 235ha of which 217ha is effective. Allen runs dairy heifers (185), steers (60), breeding ewes (863), and hoggets (300).

Why defer?

Maintain pasture quality on rest of farm at “no cost”, unlike making hay or silage and then having to feed that out. Provide a spell for the deferred paddocks to rejuvenate. Enable reseeding to increase pasture density. To suppress weeds plus other benefits.

When do you start the deferred period?

It varies depending on the season. For me, I typically shut up paddocks mid-October (last grazing) and break feed them off early February.

Who is deferred grazing suitable for?

Farmers with a spring surplus they cannot control or want to control without the cost (and workload) of making and feeding hay or silage, or chemical topping. This may be due to preference, contour or financial constraints. Farmers who can't raise their animal feed demand high enough to consume spring surplus.

Who is deferred grazing not suitable for?

Farmers who want supplement to feed out at other times of the year. Those who do not have suitable livestock (need cattle / large ewe mobs) to “break feed” the deferred back in initially.

Challenges of deferred grazing?

Planning it out. Selecting which paddocks and the timing.

The importance of deferred grazing?

Deferred grazing is one of my most important management tools and I cannot imagine not doing it as part of my seasonal management.

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LINK

For the journal article related to this project go to: www.nzgajournal.org.nz/index.php/JoNZG/article/view/448

For the handbook go to: www.agresearch.co.nz/deferred-grazing-handbook-2/

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