

Beyond the sweet spot



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Successfully executing a change to a dairy farm stocking rate takes planning, discipline and should be explained to everyone working with the cows.

New rules that require a cap or reduction of estimated nitrogen loss from a property on top of the low payout are prompting more dairy farmers to take a critical look at how they farm.

Stocking rates as well as nitrogen fertiliser use and the amount and type of supplement imported are increasingly being questioned. A planned approach to any change is crucial.

I remember one farm I worked on as a

student. The property had originally been fenced for a herd of 350 cows on 100ha of border dyke irrigated pasture.

It was so easy for us to manage as dairy farm interns over summer because the owners had ensured the paddocks were the right area for the average pasture growth rates on the farm from about the end of October to the end of March.

It was designed to be idiot proof. In fact, we spent a lot of our time between milkings working on other facets of the business like harvesting grain or looking after young stock. We had wonderful variety in our work and it was really enjoyable. Perhaps the system wasn't being pushed?

A few years later I went back to work on the same farm but it was so very different to work there.

I just couldn't get the hang of it. The herd size had increased to only 400, we had to go to two herds because the yard didn't hold all the cows, the grazing area

had also increased but not to the same extent.

That summer was a dry one and we were importing feed from a support block to make up the shortfall. Everything was difficult. Cows walked further, got lame more, and we were forever putting up electric fences to get the cows the right feed allocation.

I didn't really understand the bigger picture at the time so I just couldn't understand why it was all so hard that year when previously it seemed so simple.

On reflection I realise the farm system had changed. We had an increased stocking rate that was magnified by the very dry summer and restricted irrigation.

At the time I was too inexperienced to be able to take it all back to first principles and figure out how to deal with it. I was simply confused. We were always in the shed late, I felt more tired than usual and more things went wrong, plus the boss (perhaps quite rightly) couldn't figure out

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why we were making a pig's ear out of everything when it was so simple.

We weren't getting through the work and he was a bit cranky that it was taking two full timers to do the work that one and a half used to do. I hated that season.

One good thing was that because we were always teetering on a deficit we definitely didn't have a surplus to manage as well. Reducing stocking rate as a system change is much less forgiving because a surplus of feed is more difficult to identify and if you get it wrong it has a long term impact on pasture quality.

These days my work focuses on supporting farmers in identifying what stocking rate and nitrogen use they might apply to their farms to deliver on their farming goals. We want to find that "sweet spot" that minimises the impact of volatile milk payments and increasing constraints associated with nitrogen limits and water quality.

But it must also be workable on farm every day. I am concerned because so many people are talking about how a reduced stocking rate could be a solution. My experience tells me that any change is difficult but if you are reducing your stocking rate the execution could be even more challenging for farm managers.

Perhaps the following prompts might help you check that you have a great plan in place for your coming season. If you are considering alterations to stocking rate, calving date or spread or feeding regime

in general you need to start by calculating your annual feed and financial budgets for the changes you are considering.

Farmax is a great tool to use for this step. It can be used to view the long-term viability of a system, not just one year. It helps you see the bigger picture.

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You might also need to check the impact of any changes on your estimated nitrogen losses too if your local council plans or consents require it. For that you are best to work with someone trained in Overseer use.

If the nitrogen losses in the new system don't meet your constraints then you need to go back and tweak key aspects of the system until you land on a feed supply and demand situation that meets all of your needs including financial ones. Many people refer to this step as optimising your farm system.

That is only the first step though. It's the academic part.

To execute your plan it's all about

ensuring it is practical. The second step is to translate it into daily decision rules, particularly for feed allocation and nitrogen fertiliser use by reapplying the principles that New Zealand dairy farmers are famous for.

Use the spring rotation planner to work out spring feed allocation. Use the feed wedge tools and re-think the decision rules herd managers' will use to start and stop nitrogen fertiliser or supplement use.

These tools are so important because changing feed demand by altering stocking rate will result in a different balance date to usual and might also impact round lengths and pre-grazing covers.

Old habits will need to be replaced with new ones.

These simple tools guide you in creating a robust plan for pasture allocation for each season, month, week and day.

They will guide your new habits and have a place on all farms that feed pasture, irrespective of the proportion pasture make in your herd's diet.

I have done my time in the world of animal nutrition too, both here and abroad. The tools we have for pasture management are relevant on every dairy farm that grows pasture. Find these tools online at www.dairynz.co.nz/feed/feed-management-tools/.

If you need help to apply them then use a respected consultant or mentor. If you are not sure who is available contact



NZIPIM for some names in your area (www.nzipim.co.nz).

You can't afford to get this part wrong, especially in a low payout year. Below I have listed a few more steps that might help prompt your thinking.

Step by step

Optimise your system – Use tools such as Farmax and Overseer and trained operators to help. Take a long-term view of the farm but remember that to be feasible the new system must also meet nutrient and environmental obligations, be manageable with the skill set of the people working on the farm, consider infrastructure and resources already in place and be financially viable. Keep it real.


Re-apply the principles to identify the new seasonal decision rules or habits. Use the proven tools available to you either directly from the DairyNZ website or employ someone to help you set up a detailed plan for the season in line with your changes.

Measure and record the most important “drivers” of your dairy farm the things that help make timely decisions. Pasture covers and growth rates are obvious examples, there will be others. Record the aspects that help make better decisions. This

ensures you get return for your time or technology investment.

Plan, do, check and adjust – chances are you won't get a change in system right the first season so make sure you learn from your mistakes. Programme time to reflect, identify improvements and implement them. Continuous improvement requires discipline. It can be possible only in a champion team. Can you think of ways to reward people who do this well?

Involve everyone you can think of who will be working on the farm and who wants to learn. No one is capable of using their initiative if they don't have context and background.

Identify the skills, behaviour and attitude required to run your new system and employ people with the appropriate capabilities to execute your new strategy. Your team might need some training. 



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* For sources of comparable information visit www.pasturerenewal.org.nz