Dairy Trust
TARANAKI

Drought Recovery

at DTT Gibson

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Welcome to Dairy Trust Taranaki

Agenda

10.30 am Welcome and H&S
10.35 am Barenbrug
11.15 am walk to paddock
11.20 am Paddock demonstration - Kalin
12.25 pm wrap up
12.30 pm lunch

Lunch kindly provided by LIC and Dairy Trust Taranaki

Health and Safety

DTT GIBSON FARM

Slippery races when wet
Vehicles and machinery are operating
Electric fences are on
Any accidents or near misses to be reported to DTT staff
Meeting point: at assembly point on car park
First Aid kits located in the DTT office and the cow shed office

Restoring farm productivity after the dry

Summary

Decisions made now will affect the coming years. The first step is a farm pasture plan to get production back on track as soon as possible after it rains. Assess all paddocks and rank pastures on their condition - nurse the best pastures through the coming weeks, and undersow or renew damaged pastures.

Aim

Pasture fuels recovery. Once it rains, you need as much pasture growing as quick as possible. Grass will be your main feed for the next 12 months, so it's important to prepare now.

Farm assessment

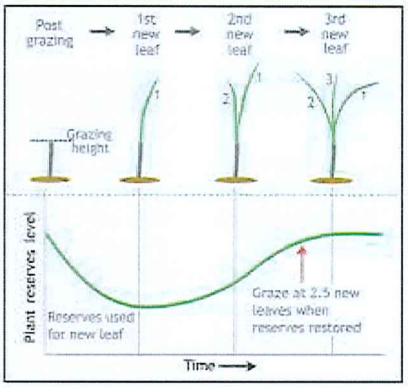
Walk the farm and put each paddock in one of 3 categories: *Category 1* pastures are likely to survive. *Category 2* you're not sure; *Category 3* pastures are unlikely to recover.

Category 1

Category 1 pastures are the most important. They will re-grow the fastest after rain, and power up your farm again, so you must look after them.

These paddocks have a good population of live ryegrass plants. If in doubt pull some plants up and check if they are dead (dry and brown throughout) or alive (have green tillers inside). As these paddocks will power the farm back up look after them by:

- On/off graze - don't bare them out. Some length (5 cm) is essential for plant survival.
- Don't graze too soon after rain. Wait until ryegrass tillers have 2.5-3 leaves (see diagram).



Category 2

Watch and wait. They could end up as either *Category 1* or *Category 3*, but only time and rain will tell.

Category 3

These paddocks may be ex crop; or have opened up; or have <50% ryegrass cover; or are mainly clover; or contain a lot of weeds. These need acted on, otherwise you won't get the productivity you need in the 2025/26 season.

For *Category 3* paddocks there are several options. Undersowing is often a great cost-effective tool (see separate sheet); cultivating for a winter forage crop; cultivating for new pasture; and spray-drilling new pasture are often combined in a farm renewal plan.

Category 3 paddocks can be sacrificed for standing stock off, or feeding out, to protect *Category 1* paddocks. A few days feeding out on them can help prepare them for undersowing.

The important thing is to make sure there is a plan for all *Category 3* paddocks, regardless of whether it is short, medium or long term.

Your Barenbrug area manager can help with more advice on renewal planning and pasture management post drought.

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Undersowing - drought recovery

Summary

Undersowing is a great option to get thin, damaged pastures growing quickly again after the dry. It is a fast, relatively low cost, with minimal disruption to a farm. Sowing dry (after 1 March) has real advantages.

What is undersowing?

Undersowing or 'stitching in' is simply direct drilling seed directly into a thin existing pasture (without any herbicide application).

Benefits

Undersowing is fast and has minimal disruption to the farm operation, so large areas can be done quickly. This makes it very useful where a number of paddocks are in poor condition due to drought.

Sow dry

Undersowing while it's dry, before rain, has real advantages:

- Seed is in the ground ready to grow with rain. In trials that gave an extra 1.5t DM/ha of pasture growth over sowing a week after rain.
- Contractors are much easier to get. Once it rains everyone wants them.
- Seed likes being in the ground - endophyte keeps better than in the bag.

But don't sow very early (e.g. before 1 March) and risk getting a strike and it drying out again:

Pick the right paddocks

Pick the right paddocks. Pastures must be thin, with bare ground, so new seedlings have space to establish. Undersowing into dense pastures usually has little success, you are better off spraying-drilling or cultivating.

Contact contractor

If you're using a contractor, get organised early before the rush.

Species choice

Select the right ryegrass. If a paddock is going into crop in spring annual ryegrass (e.g. *Hogan*). Fast-establishing, high yielding hybrids are often the best option (e.g. *Shogun, Forge*) and grow feed fast after rain. Perennials can work well, but are slower to establish so need open pastures.

Value

Undersowing results vary more than full renewal. But done well, where a high performance ryegrass is established (and weeds kept out), gives high returns.

Costs/ha		Value - extra yield	
Direct drilling	$150	Year 1 - 3000 kgDM/ha @ $0.30/kgDM	$900
Forge hybrid ryegrass 20kg/ha (*Agricote* treated)	$300	Year 2 - 2000 kgDM/ha @ $0.30/kgDM	$600
		Year 3 - 1000 kgDM/ha @ $0.30/kgDM	$300
Total cost	$450	Total value	$1,800

Sowing rate

Diploid ryegrass seed sow at 10–15 kg/ha; tetraploid seed at 15-20kg/ha. Use the higher rates for thinner pastures.

Treated seed

Must be used to control pests like Argentine stem weevil and black beetle.

Check for slugs

Slugs may not be a problem if it has been very dry, but it pays to check. Bait if necessary.

After sowing

Keep grazing the paddock normally – this limits competition for light and moisture from existing pasture plants. Use nitrogen to help boost recovering pastures. But remember to monitor herbage nitrate levels – they can be high following extended dry conditions.

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Soil Aeration

Soil compaction caused by livestock grazing can significantly reduce pasture production. Soil compaction has been a persistent challenge for farmers, particularly after severe pugging events and intensive cropping practices that compress the soil and diminish productivity.

Compacted soils exhibit reduced water movement, poor air permeability, and increased resistance to root growth, all of which hinder crop and pasture performance and decrease plant resilience. Mechanical aeration can alleviate these negative effects by:

- **Improving Soil Structure**: By breaking up compacted soil layers, mechanical aeration creates air-filled pores, enhancing soil porosity and structure
- **Enhancing Root Growth**: Aeration allows roots to penetrate deeper into the soil, promoting healthier and more extensive root systems
- **Increasing Water Infiltration**: Aerated soil has better water infiltration, reducing runoff and improving water availability to plants
- **Boosting Microbial Activity**: Introducing oxygen into the soil stimulates beneficial microbial activity, which aids in nutrient cycling and organic matter decomposition
- **Enhancing Nutrient Availability**: Improved soil aeration helps in the breakdown of organic matter, making nutrients more available to plants

expedite this recovery by enhancing drainage, air diffusion, and root penetration, thereby promoting pasture growth.

Scan the QR-Code for a video of soil aeration in action:

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ravensdown

DROUGHT RECOVERY FIELD DAY DAIRY TRUST TARANAKI
N USE SUMMARY MARCH 2025

1. After significant rain, N fertiliser will provide feed within 3-4 weeks after application.
2. The extra pasture grown will depend on the rate of pasture growth after the N has been applied.
3. In terms of drought recovery, even small N responses can be valuable for pasture recovery and livestock welfare.
4. N is a cost-effective alternative to other feed supplements
5. Apply N (and P, K and S if necessary) strategically to more productive pastures with some cover (>1500 kg DM/ha) if possible.
6. Typical N rates are, up to 60 kg N/ha (130 kg/ha urea), in good growth conditions or 40 kg N/ha (87 kg/ha urea) in poorer conditions.
7. Use the urease inhibited N Protect urea product to reduce the risk of gaseous loss (volatilisation).
8. Apply lower rates over larger areas.
9. Spell for at least 3-4 weeks before grazing, if possible.

One thing we have learned in drought recovery is those that act fastest in putting N on come out of the drought the best, despite not waiting for the best conditions. Days are getting shorter, weather is cooler, and the pasture is slowing down for winter.

Dairy Trust Taranaki provides soil moisture figures in their weekly farm walk data.

Individual farm location etc. is variable but you could use the following criteria for deciding on when to use N most effectively.

Once soil moisture reaches 25-30% then this should sustain better than 15-20 kg DM/ha/day and N fertiliser will increase this further if there is follow up moisture within 7 days of first rainfall.

Looking at the data from the DTT Farm Walk backs this up:

Gibson, Kavanaugh and Waimate West are at 16%, 16% and 13% respectively with growth rates of 11, 15 and 26 kg DM/ha /day, while Stratford grew 38 kg DM/ha/day at 44% soil moisture.

SUPPORTS THE IDEA THAT WHEN YOU ARE ON RISING PLANE OF MOISTURE YOU CAN START NITROGEN APPLICATIONS.

J LIVINGSTON 021 900 307

RAVENSDOWN MARCH 2025