

NZ GRASSLAND ASSOCIATION

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SHORT CUTS

Managing for the dry

David Stevens, AgResearch, Invermay

Managing feed and animals is what farmers do and the current drought is another part of that spectrum. Many farmers will have been through dry spells before and have taken lessons from those experiences.

It is important to take control and so planning is essential. Rule number 1 in a dry season is to take the hit once and not let it flow into next year. This applies to both livestock and pastures equally.

Farmers are now at a time of the year when they need to be protecting next year's production. This will include dairy cow condition, and as mating approaches will include ewe and hind condition. Breeding stock and replacement stock needs to be protected.

Here are some thoughts on what might be considered:

Reducing feed demand

Dairying

- 16 hour milking
- once-a-day milking
- selling cull cows
- drying off

Sheep and Beef

- selling lambs and cattle at lower carcase weights
- early weaning of calves
- taking weight off beef cows (remember that winter is still to come)
- selling store
- culling breeding stock (including replacements)

Deer

- Weaning
- selling store
- culling breeding stock

These can all be used in a number of combinations to reduce feed demand. The strategies will vary and may be staged according to pre-determined pasture cover and supplement reserve targets.

Culling may provide an opportunity to improve the long term efficiency and performance of herds and flocks. Make the effort to clearly identify and get rid of low performing stock.

Feed supply

Unfortunately it is the feed supply that is failing during a



drought. Reducing feed demand is the first approach to balancing the feed budget, along with adding supplements. In the effort to ensure maintaining the performance of the breeding stock into the future it may be economic to buy in extra feed to meet demand. Most economic analyses confirm that farmers should buy feed to maintain production of the breeding stock, but this may depend on current cash flow.

In most cases adequate energy is the most important and this should be bought cost effectively. Often high energy supplements such as grain are more cost-effective than lower energy supplements such as baleage, cost less to cart and are potentially easier to feed out. Occasionally farmers may need to consider supplements that meet the different requirements of their stock. For example, a high protein supplement may be needed for ewes approaching tugging.

Often farmers rely on using pasture reserves. There are several potential issues with using pasture reserves.

One is that stock cannot actually meet their feed demand if pasture height gets too low. With cattle this occurs at between 1000 and 1200 kg DM/ha while with sheep it is between 500 and 600 kg DM/ha.

The second is that driving pasture cover too low will compromise Rule 1 as the recovery of the pasture after rain will be compromised and the damage will not be confined to the drought period.

The low point will depend on the type of pasture, the pest pressure that is also being applied and the soil type. Pas-



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tures that are dense and comprise of a variety of species will be more robust than open single species pastures. Often these mixed pastures also have a significant seed bank in the soil and so re-grass naturally after rain. Research in Wairarapa showed that old pastures could be taken to a residual of 400 kg DM/ha without affecting their post-drought recovery.

There will also be some differences between pastures that pests like (e.g. ryegrass) and those that pests don't like (e.g.

tall fescue and cocksfoot). Graham Kerr takes us through a process to identify a range of pasture types and strategies to help in their recovery in the next article.

Following Graham's process then category 3 pastures may become sacrifice paddocks for supplement feeding to ensure a rapid recovery when it rains, rather than a prolonged recovery. Again Rule 1 is applied and the problem is contained to the dry period.

Brown paddock recovery plan – growing grass after the dry

Graham Kerr, Agriseeds

Livestock management may have been farmers' number one priority during recent dry weeks – and rightly so – but now it's time to think about pastures too.

Pasture is what's going to fuel recovery after rain, and provide the majority of your feed for the next 12 months. Continued dry conditions in the last three weeks have dramatically changed the pasture situation on many farms, and planned pasture renewal programmes need to change as well.

The best practice in this type of year is to assess all pastures on the farm, and divide paddocks into three categories. This information can then be turned into proactive pasture renewal and pasture management plans. The first step is a farm walk to evaluate paddock condition. This is sometimes best done with a local seed rep or consultant.

Most important are the *category one* paddocks, those farmers believe will survive the dry. *Category two*; those which might survive; and *category three* is for those paddocks which are obviously past the point of no return and so must be re-sown.

Category one paddocks are the key to drought recovery, because after it rains they are the quickest to start growing grass again, meaning farmers can feed stock, and start setting up pasture covers for spring lambing and calving earlier. With these paddocks the focus should be to give them every chance to recover and persist. If you look after them now, they will look after you later on

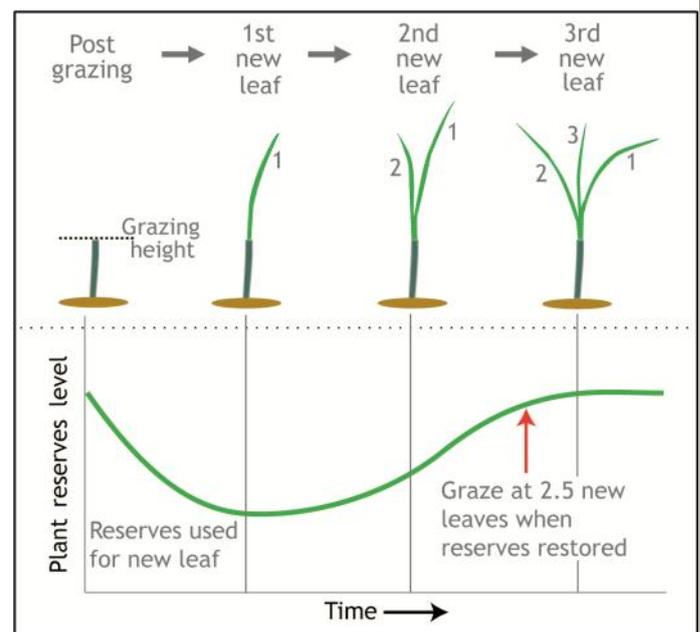
Two golden rules apply – don't graze category one paddocks to bare ground at the moment, and after it does rain, don't rush to graze them.

There is a very good reason for not baring pastures out. Ryegrass plants store the energy they need for survival and growth above the ground (not below it). Even if the pasture is brown, having 3-4cm of length on it is a lot better for the plant than having 1cm. That extra length holds the reserves that will power the plants back up and get them growing again when there is enough moisture available.

When the rain comes, don't graze too soon when there is

just a 'pick' of green grass, as putting animals on too early can in fact kill it.

Kerr says farmers need to wait until ryegrass tillers have three leaves before they graze any new growth post-rain.



Once rain comes don't graze pastures until ryegrass tillers each have 2.5 leaves, so plant reserves are replenished for regrowth.

What about the other paddocks – those which are possible survivors (category two), and those that won't recover (category three)? It may not be easy to determine whether they'll survive until it rains (category two), so wait until then to make a decision on what to do with them. However, keep in mind the longer it stays dry, the less likely these paddocks will be to survive.

Category three paddocks may have come out of summer crop, or have opened up; have less than 50% ryegrass cover remaining; contain a high percentage of weeds or have been damaged by insects. These need to be re-sown so that total farm productivity recovers as soon as possible.

Further links

Dairy NZ

www.dairynz.co.nz/page/pageid/2145860261/Farming-through-the-drought

<http://www.dairynz.co.nz/page/pageid/2145860273/Farming-out-of-the-drought>

Beef+Lamb NZ

<http://www.beeflambnz.com/farm/tools-resources/dry-management-toolkit/>

Pasture Renewal Charitable Trust

<http://www.pasturerenewal.org.nz/article/63.html>

NZGA Pasture Persistence Seminar

Changes in pastoral farming practices and pasture persistence – a review. D Clark

http://grassland.org.nz/publications/nzgrassland_publication_2227.pdf

Sowing methods for successful pasture establishment – a review. Thom et al.

http://grassland.org.nz/publications/nzgrassland_publication_2231.pdf

Whether farmers opt for under-sowing, a winter crop, new pasture or a mix of all three, if they're relying on a contractor they must start talking to them now. Get in touch with them as soon as possible. The area of seed drilled will be well up in many regions, so you need to keep them in the loop and let them know what your plans are well in advance.

Finally, if farmers haven't ordered seed, they should do so immediately, to make sure they get the cultivars they want, and the seed is ready when needed.



How to repair drought-damaged pastures

Graham Kerr

A good renewal plan is now essential for pastures which will not survive the current drought, to get your farm back up to full productivity as quickly as possible.

Having a plan puts you on the front foot coming out of the dry, and gets your recovery off to a good start.

Once the pastures which need to be re-sown are identified, key decisions include:

- Which pasture species should I sow?
- Is winter cereal an option?
- Should I undersow, or plan to cultivate?

Pasture options

Several different plant species are available for renewal, each with their own benefits. A good pasture renewal plan will typically use two to three species.

Annual ryegrass establishes very quickly, for example, producing large volumes of feed in a relatively short time to help you post-dry. Use annuals for paddocks which you plan to crop this coming spring (as they only persist until the start of November).

Italian ryegrass is a great 12-18 month option, with the same fast growth as annual ryegrass, but better persistence.

Hybrid ryegrass also establishes rapidly, and cultivars with endophyte will provide a two to three year pasture. New cultivars can produce more yield over 12 months than an Italian, and give the flexibility of another year or two of grazing.

Perennial ryegrass is still the backbone of our farming systems, with the best persistence and long term dry matter (DM) production.

Winter cereal

For some paddocks, which are due to be sown into a spring crop later in the year, a cereal forage crop (e.g. oats, triticale) planted now may be suitable to provide a bulk of winter feed.

Renovation options

Sowing method is also an important choice. Cultivation is typically the best way to establish new pasture, but takes significantly longer than other methods. If you're sowing perennial ryegrass, however, this is the best option. Cultiva-

tion is also advised where black beetle are present (>15-20/m²).

Undersowing, or direct drilling seed into thin pastures without any herbicide application, is very useful in this sort of autumn, where you have a number of paddocks which will not persist. Undersowing is simple and fast, so it can be used over large areas, and with the right type of drill you can sow seed now, without having to wait for rain.

To get the best out of any undersowing, remember:

- Pastures must be thin, with bare ground, so seedlings have space to establish. Undersowing into dense pastures usually has little success.
- Fast establishing species work best (e.g. Italian or hybrid ryegrass)
- Use treated seed, as insects are likely to be present without cultivation.
- Check for slugs, and bait if necessary. Slugs may not be a problem if it has been very dry, but it pays to check. Put some sacks or boards out overnight and check underneath the next day.

