

Drought feeding and management

When drought strikes

Plan and act early

When drought is predicted, or when things become unusually dry, act promptly.

- Make a plan for your feeding and animal management.
- Keep a record of your plan and the decisions you make. This will be useful when you are managing future droughts.
- Make sure you have (or can access) more baleage, lucerne hay or other bulk feeds than you are likely to need. Once drought sets in, bought-in feed becomes more costly and supplies may become tight. See *Feeding supplements* (below).
- Limit the impact of the drought on stock to the current season. Well-fed young females will reach mating weights on time. Well-fed breeding stock will give you a good fawning next season.
- Limit the impact on pastures to the current season. 'Gently' manage paddocks that are likely to survive the drought.
- If your budget allows, consider off-farm grazing as an option for young capital stock.
- As the season progresses, keep control of the situation by making decisions based on your plan.

"It's important to set goals in advance and move with the season – you might decide, for instance, that if it hasn't rained by the 1st of February, you will drop some of your older hinds and velvetting stags."

Marlborough deer farmer, Euan Rentoul

Water is critical

Deer must have a good supply of clean water at all times. This means having a system that can deliver at least 20 litres per adult red stag a day during drought.

Deer do not live very long without water, which means a supply failure during hot weather can be fatal. Severe dehydration may also cause permanent kidney damage and reduce life-time production.

If you have a tank-based water supply, consider investing in an electronic monitoring system.

Building redundancy into the system also makes sense. Marlborough deer

farmer Jason Rentoul says he has two sources of water in every paddock. He also has a reticulated two-well, two pump water supply system. If one pump or well goes down, the remaining pump/well can supply the whole system.

Animal management

If a drought is underway:

- Check every day that all stock have a good supply of clean drinking water (above).
- Sell non-capital stock, such as early lambs and store cattle.

Key points

- When drought sets in, take control. Make a plan for what you will do if the drought continues.
- Aim to limit the impact of drought on stock and pastures to one season.
- Check your water supply and monitor it daily. A good supply of clean water is essential for stock welfare and survival.
- Take heart. With good nutrition, it is possible to meet deer production targets in a drought.
- Drought is stressful. Keep in contact with other deer farmers. Take time to relax off the farm and keep making decisions (be positive).
- Longer-term, consider ways to drought-proof your farm.



Photo: Trevor Walton

Wairau Valley deer farmers Giselle and Marilyn Shewan plan for drought; buying in feed well before it's needed. "We don't want to thrash the paddocks, so we start feeding well before the grass has gone."

- In a spring drought, send all finishing deer to the processor in November whether or not they have reached target weights. In most years, once the chilled season is over, your deer won't grow fast enough to offset the weekly drops in schedule prices.
- Check velvetting stag records for early culling. Do you need so many yearling stag replacements?
- Cull some of your older breeding hinds and some of the poorer yearling hinds.
- Plan for early-weaning. Before weaning, feed silage and grain to hinds and fawns. This will support lactation and hind condition and get fawns used to this form of feeding.
- To ensure good conception and fawning rates, mature and maiden hinds must be at least maintaining their condition when they go to the stag.

Early weaning (mid-February)

Wean early (in mid-February) if there is quality feed available for fawns, so hinds do not compete with their fawns for this feed. Don't wean earlier than this, because the fawns will still be dependent on their mothers.

Early weaning will reduce feed demand by 12-20% and will enable you to give weaners and young stock priority

Destocking priorities



Euan Rentoul

Long-time Marlborough deer farmer Euan Rentoul says it's human nature to hang onto trading stock and finishers, to keep them growing to target weights.

"Don't do this. As soon as they hit killable weights they should be out the gate," he advises.

"If you need to sell breeding stock, start with your oldest animals."

It is not advisable to transport hinds with fawns at foot but, if there is no choice, draft them into separate pens for the journey.

Book cull stags in for processing early. With older stags, it may pay to send them to the processor after their first cut, rather than waiting for their regrowth. From 20 February they cannot be trucked until the roar is over.

access to high quality feed. It will also enable hinds to start recovering condition before going to the stag.

AgResearch figures show that if hinds lose BCS in the run-up to the roar, there may be a 5-10% increase in the number of dries, a 7-10 day delay in fawning and 5-6 kg lower weaning weights.

Pasture management

Once the dry begins, start feeding out. The earlier the better. Aim to retain roughage in the paddock for as long as possible.

Euan Rentoul says that even when deer are being fed quality supplements they will gradually eat through the tag on the hills.

Ideally, they won't eat it out completely, as grasses store

their energy above ground. Even if the pasture is brown, 3-4 cm of length is better than 1 cm. This will help power regrowth when the drought breaks.

Think about putting your paddocks into three categories:

1. Those that will survive a drought
2. Those that are possible survivors
3. Those that will not survive.

Try not to graze out category 1 paddocks. The fate of category 2 paddocks will depend on the severity of the drought and how long it lasts. Use category 3 paddocks for feeding out. Have a plan for regressing them when the drought is over.

Feeding supplements

Start feeding early, so the base of the pasture is preserved for as long as possible (see above).

Feed to prevent weight loss. Much less feed is needed to maintain weight than to regain it once it has been lost.

If you need, or are likely to need, to buy in supplements, do so early. Prices will inevitably increase and supply may become difficult if the drought is prolonged.

Think ahead. Your breeding hinds may be OK on the hills in January, but will they need high protein supplements – such as nuts, peas, linseed, soya meal etc – in the lead-up to mating?

Before buying, first do a cost/benefit analysis of the various feed options.

The **Feed Cost Comparer** on the Deer Hub, a web-based tool, makes these calculations easy.

You can also do your own calculations by multiplying the ME (metabolisable energy) value of the feed by its DM (dry matter) percentage so you can compare like with like. A medium energy supplement like PKE (palm kernel expeller) or a high energy grain like barley or maize is often more cost-effective than baleage or hay.

If you are thinking of buying PKE, first check with your venison marketer. Some markets are sensitive about the feeding of PKE.

Depending on relative values, it might pay to sell some of your baleage and buy in grain or PKE. But don't sell

DEER FEEDERS

Not an excuse to fill and forget

'Advantage' stock feeders are being used by many deer farmers. They ensure deer have constant access to supplementary feeds with minimal wastage.

Seddon deer farmer Justin Stevens has some tips for their use:

- To reduce bullying and to ensure every animal gets access to the feed, it's better to have two small feeders – spaced well apart – than a single large feeder.
- There's an ideal pellet size for each model of feeder. If the pellets are too small, they can flow out on to the ground. Too big and you can get blockages.
- If you are buying a big order of pellets, specify the ME you are looking for and then test to check that you are getting what you ordered. The cost of the test is small relative to the cost of the feed.
- To reduce the risk of birds flicking pellets, grain or peas out of the feeder trough (and deer gorging

on these), don't place the feeders under trees where birds congregate.

- Prevent deer from gorging on peas as these swell in the gut when the deer drink. This can be fatal.
- A 50/50 mix (by volume) of grain and PKE flows better through the feeder than grain or PKE alone. Also, there's a much smaller risk of getting grain-related acidosis.
- Stock feeders are great, but they're not an excuse to 'fill and forget'. Stock, feed and water need regular monitoring, especially in a drought.



Photo: Trevor Walton

Seddon deer farmer Justin Stevens with the size of pellet that works best in his Advantage feeders



Photo: Justin Stevens

Justin Stevens gets good results from supplementing silage or baleage with concentrates, using Advantage feeders. He strongly recommends getting pellets ME-tested if you are buying a big order

all your baleage! Grain should not exceed 60% of an animal's ME requirements.

Introduce grain or PKE to the diet gradually (starting at 25-50 grams a day) to give time for the rumen to adjust.

Bossing and overloading can be a problem with dominant animals. To reduce this risk when feeding grain/PKE on the ground, spread it out so that all animals get their share. If you see excessive bullying, remove affected animals to a distress mob and manage them separately.

If you are having difficulty obtaining feed or off-site grazing, contact Federated Farmers or DINZ. They may be able to find a farmer who can help you.

When the drought breaks

After it rains, continue to feed supplements. This will give time for pastures time to recover and for winter feed reserves to build.

To boost pasture recovery, consider applying urea to category 1 paddocks.

Avoid grazing recovering pastures in the autumn as soon as some growth appears. If you graze pastures below 1000 kg DM/ha you will reduce their growth by up to 25%. This could be as much as 25 kg DM/ha/day or 750 kg of pasture/ha/month.

Beware: as grass growth recovers in warm damp conditions, populations of parasite larvae on pasture will increase rapidly. A parasite control plan will be needed for your young deer. Ask your vet about the latest parasite control options and check out the [Internal parasites Deer Fact](#).

Have a plan for re-sowing category 2 & 3 paddocks. Under-sowing or direct drilling with winter cereals or annual ryegrass may be a good way to build a bank of quality winter/early spring feed.

Look after yourself

Droughts are stressful. Don't be staunch and try to battle the blues in silence. Some tips:

- Network with other deer farmers. Share your worries with them or a friend
- Have fun and laughter with family and friends
- Eat well, go easy on alcohol, get enough sleep
- Get exercise off the farm by playing sport, biking, swimming, surfing, tennis, tramping, hunting etc
- If stress-related issues are not going away, talk to your GP, or local Rural Support Trust, Freephone 0800 787 254. The Trust can put you in contact with personal and business advisers, and can negotiate with your bank if you are in financial difficulty.

The [Beef + Lamb Dry Toolkit](#) (link page 4) has some excellent advice on managing the stress of drought.

How much to feed when there is no pasture?

FEEDING RED DEER IN SEVERE DROUGHT ON BARE GROUND IN JANUARY

Approximate daily rations for 100 animals

	HAY		Baleage/ Silage		Grain
Hinds ¹	380 kg	or	1,300 kg	plus	120 kg
Yearlings	190 kg	or	650 kg	plus	65 kg
Stags	230 kg	or	800 kg	plus	95 kg

¹With fawns at foot

Assumptions

1. Hay is 8.5 MJME/kg DM; grain is 12.5 MJME/kg DM
2. Hay and grain are 85% DM; baleage/silage is 25% DM
3. Rations are set at maintenance.

Important

1. This table is a starting point only. The DINZ [Feed Intake Calculator](#) is an excellent tool that's easy to use. It adjusts rations as animal needs change with the season.
2. Take feed utilisation into account when calculating how much to feed. Utilisation rates can vary greatly, depending on many factors including feed type, feeding method, animal age, previous exposure to



Photo: Trevor Walton

The DM content of baleage and silage may range from 20-35%. This makes it difficult to accurately calculate how much to feed deer (or other livestock) on bare paddocks in a severe drought the feed type and the severity of the drought.

3. Regularly weigh or body condition score (BCS) a selection of each mob to check that diets are adequate. For information on BCS, refer to the Deer Fact, ['Best practice management of pregnant hinds'](#), or check out the [Deer Hub](#).

Looking ahead

Consider ways to drought-proof your farm

Forecasters are getting better at predicting droughts. Keep a watch on [NIWA's climate outlook](#) for seasonal climate updates.

Because of global climate disruption, droughts are likely to become more frequent and more widespread than in the past. Drought may affect districts that were once seen as being summer-safe.

In response, some farmers are now drought-proofing their farms.

Lyndon & Millie Matthews of Puketira Deer, North Canterbury, farm in a summer dry environment. True droughts – “where the hills go from gold to grey” – occur maybe once every seven years, but they are prepared for this.

“We cut as much silage as we can in the good years, to carry us over the dry years. We grow barley to provide grain for the deer and straw for the cattle. We also grow raphno for the deer, which they don't really like, but is very water-efficient. It comes away very quickly after autumn rain,” says Lyndon.

“We are set up pretty well for a one-off drought. Things become more difficult when we have two droughts in a row. Our philosophy is simple, if you can't feed the animals properly you need to get rid of them.

“Our aim is to make sure our deer stay in good condition, regardless of the drought. We want it to be business as usual once the drought breaks.”

The Matthews wean each year on 20 February after training the fawns to eat their post-weaning tucker while they are still on their mums.

In a typically dry autumn they supplement the fawns with baleage and barley, and the hinds with pit silage and barley. In more difficult years they've successfully fed newly-weaned fawns from Advantage feeders and hinds on barley straw and PKE.

Summer crops

Fodder crops are a useful form of drought insurance, but they need to be established early in order to be useful in a drought. If there is no drought, all is not wasted – they can be fed-off in spring.

Deer do well on forage brassicas and fodder beet. To give their rumens time to adjust, introduce them to forage brassicas over 7-10 days. With fodder beet, 14-21 days.

Because fodder crops are low in fibre and protein, supplement deer with about 1 kg/head/day of quality baleage or lucerne hay.

Photo: Puketira Deer



North Canterbury farmer Lyndon Matthews says their farm is pretty well set up for a one-off drought. “Things become more difficult when we have two droughts in a row.”

Farming system changes to consider

- Have a proportion of your stock units – say 25% – as trading stock. Destocking by selling store lambs and cattle means you don't have to sell or slaughter prized breeding stock.
- Reduce your overall stocking rate, so you are slightly understocked in an average year. If you are overstocked at present, you may find a (say) 10% reduction in your stocking rate has little or no effect on farm production. Having fewer animals also means the system will be under less stress if you can't get killing space for your culls.
- Plant part of the farm in drought-tolerant, nutritious, summer growing species like lucerne, chicory and plantain. These crops boost growth rates in fawns and weaners, making them profitable even in normal years.
- Plant fodder trees in rough corners and on slip-prone slopes. Japanese fodder willow, Matsudana willow and Lombardy poplars are easy to establish, grow fast and make excellent drought feed. Branches can be direct grazed by deer, cut and carried to the animals, or put through a chipper and fed.

More >>

DINZ Deer feed requirements:

www.deernz.org/deer-hub/feeding/feeding-deer/

DINZ Feed Cost Comparer & Feed Intake Calculator:

www.deernz.org.nz/public/webapp/index.html

MPI Dealing with Drought Conditions:

www.mpi.govt.nz and search for 'Drought'

Beef + Lamb NZ Extreme Dry Toolkit:

www.beeflambnz.com/news/extreme-dry-management



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