



FACT SHEET

MARCH 2017

STRATEGIES USED BY FARMERS IN DROUGHT

This fact sheet outlines strategies used by Central and Northern South Island farmers in 2015/16 to manage and mitigate the effects of drought.

Off-farm grazing, early weaning and alternative feeds were just some of the management options used by these farmers, who all spoke at Beef + Lamb New Zealand Farming for Profit field days.

EARLY DECISION MAKING

Bert Oliver, Manager, Inverary Station, Mt Somers

Strategies used:

- Draw up a plan
- Off-farm grazing
- Buy-in feed at good prices
- Early weaning onto legumes
- Sell lines of cows and calves to take advantage of strong prices.

Manager Bert Oliver and farm owner John Chapman, heeded the warning of predicted El-Nino weather patterns early, mindful that a tough winter in 2015 had exhausted their supplementary feed stocks.

Bert began writing an action plan in August of that year; prioritising specific actions and ticking them off as they happened.

He advocates early decision making and not delaying action.

“You might think you are missing out on things, but it’s when you don’t make those early decisions that you wish you had.”

They weaned five-year ewes early, at 60 days, which allowed them to sell 1100 cull ewes on a higher schedule in December. Other mobs were assessed week-by-week.

They sold a line of unrecorded breeding cows (Inverary Station has been performance-recording their commercial cows for many years) to the North Island to take advantage of strong cow prices and

remove a class of stock that would have struggled in the dry conditions.

To protect the performance of their future breeding stock, Bert and John wintered 1500 hoggets and 140 heifers off-farm.

Tom Maxwell, Maxwelton, Scargill Valley, North Canterbury

Strategies used:

- Off-farm grazing
- Foetal aging
- Fodder beet
- Early weaning
- Nitrogen
- Legume-based feed crops.

For Tom Maxwell, money spent off-farm grazing a proportion of his ewe flock in 2015 was money well spent.

The ewes returned home in good condition and fed their lambs well. Good pre-weaning lamb growth rates allowed Tom to skim-draft (to 34 kg) and wean his August-born terminal sire lambs in early November.

A stand of Tonic plantain and Relish red clover, established that spring, proved a valuable feed for early-weaned lambs.

“The lambs did really well on it. It gave us the option to wean early, as we knew we had that feed for the lambs.”

Subterranean clover, endemic in Maxwelton’s hill country pastures, also helped drive ewe lactation and pre-weaning growth rates.

Tom found foetal aging at scanning to be a useful tool in drought. He foetal aged the ewes into three lambing date lines and feed management was adjusted accordingly.

A 3 ha fodder beet crop proved to be invaluable in the winter of 2015. Although intended for trading cattle, it was instead used to feed 1000 ewes for 55 days from June. While Tom fed a lot of supplement with the crop, it allowed him to build pasture covers for lambing.

Henry Sheild, Cheviot

Strategies used:

- Early weaning
- Palm kernel expeller (PKE).

Henry Sheild has been early-weaning his ewes for several years and finds it works well.

The maternal lambs are weaned at day 70 and the terminal sire lambs at 90-100 days.

He says one of the biggest advantages is that allows the early sale of cull ewes.

For Henry, palm kernel expeller (PKE) has proved to be a valuable supplement for his ewes.

He started feeding PKE in mid-February 2015 and while it took the ewes a short time to get used to the feed, it did put condition on them.

“It helped us a hell of a lot actually.”

Henry allowed 300 g of PKE/ewe/day-around a quarter of the ewes’ diet over mating and 20% of their maintenance requirements at other times-and continued feeding it right through to lambing without any problems.

While copper toxicity can be an issue with PKE, Henry had no animal health problems with stock on the feed.

Jo and David Grigg, Tempello, Marlborough

Strategies used:

- Clover-based pastures
- Hoggets grazed off-farm
- Cut-off dates for decisions
- Prioritise classes of stock to sell
- Avoid buying in supplement.

The Marlborough couple is no stranger to drought. In 1997, El Nino weather patterns meant they received just 200 mm of rain on their hill country farm and had to spend \$200,000 to keep their capital stock alive and develop a reticulated water system.

Recognising that, under climate change, droughts were likely to occur more frequently, Jo and David knew that their farm system had to change and that they needed to transform pastures, stock policies and their attitude.

Back then the farm was in large blocks, making spring pasture control difficult. Pasture quality was therefore poor, lambs were slow-growing and ewes were light at weaning. It was a downward spiral.

The farm was over-sown with clover in the 1950s and 1970s (along with some sub-division) but it had not been able to flourish under the old management regime.

In 2000, the Griggs became Meat and Wool New Zealand’s (now Beef + Lamb New Zealand) monitor farm for the region and, with the assistance of clover expert Dick Lucas and local veterinarian Pete Anderson, began an overhaul of their farm system.

They invested in 30 km of fencing, spent \$150,000 on a water scheme, reduced ewe numbers by 400 and added 100 cattle.

But the most important change was learning to manage the Woogenellup and Mt Barker subterranean clover endemic in their hill country pastures.

“It was sown by my father—but it was Dick Lucas who showed us how to manage it,” says David.

The clover can produce at least 3000 kg DM/ha annually but in a drought year this is reduced to 1800 kg DM/ha.

To encourage the clover in a specific block, the grasses are put under grazing pressure by cows and calves through January and February.

Once it rains in autumn, most of the resident, buried clover seed strikes and grows. David says to help preserve the plant, it should not be grazed until the five trifoliate leaf stage.

Jo explains that, after scanning in June, they identify the twin-bearing ewes and put them on the now lush clover and grass pastures-behind a hot wire.

The break is shifted daily and cows follow the ewes to clean up residuals. This reduces grass competition for the clover.

The high quality feed ensures the ewes are maintaining a minimum body condition score of 3 going into lambing; and having the clover blocks means the Griggs can spell the lambing areas and build pasture covers.

After lambing, the clover-rich pastures drive lamb growth rates. The couple stress the importance of growing lambs quickly in a drought-prone environment.

“We’ve got to have lambs growing from day one,” says David.

Using the subterranean clover, lamb pre-weaning growth rates can hit up to 450 g/day and the average Corriedale weaning weight is 34 kg.

Lambing percentages from their Corriedale ewes have been 135% over the past three years.

The Griggs have not over-sown any more clover onto their hills.

“It’s there. It was just a matter of learning how to manage it,” David says.

“It’s money for jam.”

Clover uses rain more efficiently than grass-based pastures and being able to grow stock well on hill country means there are no pugging issues from grazing the heavier soils on the flats.

Griggs' recommendations heading into drought:

- Monitor weather trends
- If pasture is going to seed early, make some decisions
- Stick to decisions and don't beat yourself up
- Have cut-off dates in mind
- Sell older cows and calves first
- Consider selling half your yearling cattle
- Sell third-cycle ewes
- Sell annual-draft ewes and lambs early
- Graze hoggets off-farm
- Don't drop covers when pastures brown-off—sell stock instead
- Keep off subterranean clover when it germinates in autumn
- Don't sweat about false strikes in January. There is plenty more seed in the ground if you have had clover there for years
- Avoid feeding supplements—they cost money
- Keep looking forward
- Surround yourself with people who will help
- Do a cash-flow budget
- Get yourself off-farm regularly
- Set yourself up so you can take opportunities when the rain comes
- Keep in contact with your neighbours.

For more information on clovers visit www.lincoln.ac.nz/dryland

SCORING IT UP

Body Condition Scoring (BCS) requires farmers to put their hand on each and every ewe and using the balls of the fingers and thumb, assess the fat cover over the last (13th) rib and backbone.

The fat cover is then given a score of between one and five, with one having no fat cover (starvation) and five having excessive fat cover.

BCS is simple, free and can significantly improve the productivity and profitability of a ewe flock.

After three years of BCS, North Canterbury farmer **Tim Hawke** is now reaping the rewards of the practice in what has been a lean year feed-wise.

"This year is the first where I've seen a big difference and Condition Scoring has now become part of my management style.

"For me it's more important than weighing."

Over a particularly dry summer, Tim made the decision to BCS his 1000 Snowline ewes four times, pulling out and strategically feeding the lighter ewes on grain. Previously he had just been condition scoring at weaning, tupping and before lambing.

The result of this concerted effort over summer was that at scanning there were only two or three ewes with a BCS below 3.

Tim admits he was even surprised by that result.

Maintaining ewes at a BCS of 3 meant that despite the tough summer, his ewes scanned a very respectable 192% (including two-tooths).

Tim and his wife Dinah farm 289ha of flat land at White Rock. Tim started condition scoring as part of his involvement in Beef + Lamb New Zealand's Canterbury-based Sheep Profit Partnership.

He uses a sheep handler to BCS the ewes. The sheep handler has scales and a drafter so he can also weigh the sheep at the same time and then drafts them off according to their BCS.

He says the other way to do it is to simply run them up the race and mark and draft any that are not at a BCS of 3.

To score the ewes, Tim places his hand on the saddle of the ewe, with his thumb on the spine and uses his four fingers to assess the fat cover.

As he says, it's about consistency rather than getting an exact measurement.

What he has found is that it is impossible to assess those subtle changes in body condition visually—but those changes make a huge difference in the performance of the sheep.

Tim has now got into the habit of running his hands over the ewes every time he has them in the yards.

"It certainly changes the way you look at an animal."

For the first time last year, Tim also Body Condition Scored his 650 hoggets as he has sought to make best use of his feed resources by targeting those that actually need it.

Half the hoggets are sold as in-lamb two-tooths which for Tim are generating a better return than dairy grazers.

Striving to maintain ewe body condition at three has certainly helped drive the productivity and profitability of Tim's ewe flock.

"If more people did it then they would realise that it really does affect the bottom line."

FEED BUDGETING

Winter is the most important time to be carrying out a feed budget, particularly in times of stress.

Farm systems scientist, Tom Fraser, says farmers should be doing short and long-term feed budgets, but the short-time budget is the most critical.

"Once you've determined what your feed requirements are, you can then consider the different options available to fill any gaps."

Beef + Lamb New Zealand (B+LNZ) run feed budgeting workshops with the region to meet demand. Contact your local Beef + Lamb New Zealand Extension Manager (visit www.beeflambnz.com) to see when the next workshop is available.

FEED DEMAND

In severe drought it is likely that at least a portion of your stocks' energy requirements are met by supplements.

To retain productivity, it's important to accurately assess the energy demands of each livestock class and to feed to that level.

The resource 'A guide to feed planning for sheep farmers' is a useful tool to assist with this (see www.beeflambnz.com to download a copy). In the appendices it provides a number of tables that outline the energy demands of most classes of stock and the nutritional value of many feeds and supplements.

The other useful tool is the FeedSmart app which is available for smartphones, tablets and computers. It helps farmers make instant and accurate decisions around feed management while they are in the paddock and brings together a raft of variables to provide instant information on nutritional requirements of different classes of livestock, feed values and feed allocation.

The app is available free of charge at www.feedsmart.co.nz and once downloaded, it works offline anywhere, anytime a device is turned on.

The table below provides a very rough guide to how much supplement (baleage and barley) is required to achieve a certain level of performance across some classes of stock. Note this is an approximate guide.

	Energy demand MJ ME	Baleage (35% DM, 10 MJ ME/kg DM)	Barley
Maintain a 60 kg ewe	10	1.9 kg	300 g
Grow a 40 kg ewe hogget at 100 g/day	12.5	2.6 kg	300 g
Grow at 250 kg steer calf at 0.5kg/day	55	15.7 kg	

So, for example: approximately 1/3 of a bale of baleage (550 kg bale) and 30 kg of barley will maintain 100 ewes. It is worthwhile to weigh some sample bales of your baleage, hay and straw to get an indicative bale weight. Otherwise it really is guess work.

Use the table below to determine the daily supplementary feed requirements of each class of stock that you are feeding supplement to. This assumes that 100% of their diet is supplement. Average energy values for some supplements are included below. *Note: In reality there will be a wastage factor - the stock will not be able to eat 100% of what is fed, e.g. barley trampled into ground. Consider this in your allowances.*

Stock class	Tally	Energy demand/head (MJ ME)	Total energy required for mob (MJME)	Baleage (35% DM, 10 MJME)	Barley (86% DM, 13.1 MJME)	Hay (85% DM, 8.4 MJME)	Barley straw (86% DM, 7.1 MJME)	Palm kernal (90% DM, 11 MJME)	Other:
<i>E.g. A mob of ewes</i>	400	10	4,000	3,000 MJME 857 kg	1,000 MJME				
TOTAL									

To illustrate the working to get the quantities in the above examples:

1. Baleage: If 75% of the feed requirement is to be met by baleage then it must provide 3,000 MJME to the mob. If 1 kg DM provides 10 MJME, then 300 kg/DM (3,000 divided by 10) will be required to meet that feed demand. If the baleage is 35% DM, then 857 kg of baleage is required (300 kg x 1/.35). If a bale of baleage weighs 550 kg then this is just over 1.5 bales.
2. Barley: If the remaining 25% of feed demand is to be met by barley then it must provide 1,000 MJME to the mob. If 1 kg DM provides 13.1 MJME, then 76 kg DM (1,000 divided by 13.1) will be required to meet that feed demand. If the barley is 86% DM, then 88 kg of barley is required (76 kg x 1/.86).

It is now useful to determine the total amount of supplementary feed you will require over your planned feeding period. You can use the total figures you calculated in the previous table to fill in the 'Total Daily Requirement' column below. Then multiply this figure by the number of days you think you will need to feed out for to calculate the amount of each feed you will require.

Supplement	Total daily requirement	Number days feeding	Total requirement
Baleage			
Hay			
Straw			
Barley			
Palm Kernal			
Nuts			

FINANCIAL

Some considerations need to be given to the financial impact of the drought – especially the purchase of supplements, altered timing of stock sales, and altered values of sale stock. Communicate with your accountant and bank manager. Key factors to consider are the impacts on cashflow, your overdraft limits, tax and access to drought financial support.

PLANNING AND DECISION MAKING

This section of your plan provides you with an area to record your decisions and planned actions.

It is advisable to sit down every 10 days and work through your plan, review the current situation and lay out the decisions and actions you need to take if climatic conditions do not improve.

Date:

Is the drought predicted to break in the next week?

Do I have enough supplementary feed to get through the next month?

Do I need to consider sourcing grazing for some classes of stock?

If so which class/es of stock and who do I need to contact to start the ball rolling on this?

Are there low priority classes of stock that I should consider selling?

If so what classes and who do I need to contact to start the selling process?

PLANNING AND DECISION MAKING *continued*

What actions do I need to take now to best position the farm and business to recover in the medium term?

If the drought has not broken in 10 days' time, what actions do I need to take then to best position the farm and business to recover in the medium term?

MORE INFORMATION

To download the following Beef + Lamb New Zealand resources, please visit www.beeflambnz.com or for a hard copy email: resources@beeflambnz.com

- A guide to feed planning for sheep farmers
- Condition scoring for beef cows
- Ewe body condition scoring resource book
- Summary papers for managing Lucerne
- FeedSmart User Guide

INTERACTIVE TOOLS

Pasture Growth Forecaster

www.pasturegrowthforecaster.co.nz

FeedSmart app

www.feedsmart.co.nz

OTHER RESOURCES

Scandrett Rural feed budget

farmingsheep.co.nz/wp-content/uploads/2010/12/Scandrett-Rural-Ltd-Feed-Budget-Spreadsheet-pdf.pdf

Agpest

agpest.co.nz

ANZ cash flow forecaster

<https://bizhub.anz.co.nz/resources/video-managing-your-cash-flow.aspx?cid=sem--business--c>

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