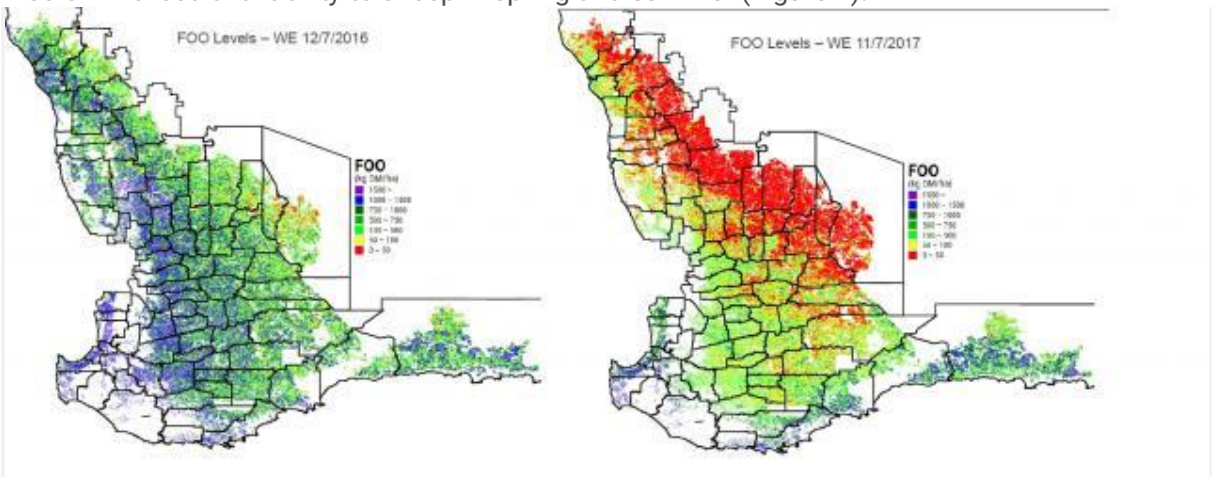
Strategies and tactics for sheep producers in a poor season

In July 2017, information days were held to advise agribusiness on supporting sheep farmers through the dry season. Where sheep are important to a farm business, current wool and sheep prices mean that the sheep enterprise is still very profitable. The overriding message was to prepare early for the worst, but stay positive and support each other.
This page provides a summary of the presentations by Ashley Herbert, Agrarian Management and John Young, Farming Systems Analysis Service. This information was created in response to the 2017 poor season.

Introduction

The autumn of 2017 saw lower than average rainfalls in the south of Western Australia and a significantly delayed break that impacted on pasture germination and growth. There were quite severe conditions in the north and the east of the Wheatbelt in July and the low pasture growth would limit feed availability to sheep in spring and summer (Figure 1).



July Feed On Offer (FOO) levels (a) 2016 and (b) 2017, Pastures from Space (Landgate).

How is the 2017 drought different from others?

- Market conditions for sheep are excellent at the moment. There is record profitability for sheep both nominally and Consumer Price Index (CPI) adjusted. Adjusted for CPI shows the second-highest profitability for sheep in the last 30 years. This is a great price incentive to keep sheep on the farm.
- There are also more options to sell into markets, for example lighter lambs can be sold into air freight markets that didn't previously exist, and there is a reasonable market for livestock to eastern states. This means the pressure to act is not as great as in previous droughts because it is unlikely that the sheep market will collapse as it has in the past.
- Sheep farmers have more sophisticated knowledge to prioritise the sheep to keep. This includes information on ewe nutrition developed from the Lifetime Ewe Management program, as well as on the impact of reducing ewe nutrition, and the cost of losing weight or value in getting ewes to gain weight. The industry didn't have this data in the past.

Dealing with the difficult season – planning and strategies

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a copy of the presentation powerpoint
watch the video of the Perth presentation
A poor season doesn't just happen overnight; it is an incremental process that creeps up on sheep farmers. People think it is going to rain, wait for it to rain, hope it is going to rain, and at some stage it becomes obvious that things aren't going very well and decisions need to be made.
The timing of decision-making is very important to the options that sheep farmers have, and how effectively those options can be employed. People often leave decision-making too long, putting off the difficult choices, until they are left with few options, which are unpleasant and very expensive.

Planning ahead in every season

It is important that sheep farmers have cues that trigger decision-making. One of those cues is whether rain has been received by the end of May. By making decisions in good time, farmers can keep their options open and make decisions at the best time when those decisions can add value to the business. Sheep farmers benefit from being proactive and decisive.
Decisions made by farm businesses with regard to sheep fall into two phases:
Phase 1: Does carrying capacity need to be increased (produce more feed)?
Phase 2: Does demand need to be reduced?
It is important to recognise what phase the sheep enterprise is in: is it in the phase when the business tries to carry the current sheep numbers, or is it at the stage when the business needs to reduce the demand. There are key decisions that go along with those phases.

Tactics

Tactics	Outcome
That increase carrying capacity	
Increase supplementary feeding	Maintain stock condition- sustain flock production, reproduction and sale value
Reduced crop- increase pasture	Reduced winter stocking rate but less stubble area to graze following summer
Put stock in containment areas	Preserve ground cover, protect top soils, defer graze pastures to increase growth
Growth promotants on pastures	Increase winter and spring pasture growth
Control pasture insects	Increase winter and spring pasture growth
Graze crops	Defer graze pastures, reduce supplementary feeding
Strip grazing	Increase winter and spring pasture growth
Rotational grazing	Increase winter and spring pasture growth
Early weaning	Maintain ewe condition to reduce the chance of carry over effects to next joining
That reduce feed demand	
Selling dry stock	Reduce stocking rate, maintain core breeders
Agistment off-farm	Reduce stocking rate at home but maintain flock size for when the season breaks
Early stock sales	Ensures surplus sheep don't consume summer feed reserves- more for core flock

Figure 2 Tactics that increase carrying capacity or reduce feed demand and outcomes

Every year a sheep enterprise will enter the first phase, increasing carrying capacity by feeding sheep. Some years sheep farmers might feed earlier, a bit longer or a bit more than others; the business might reduce crop to increase pasture area. This is all about carrying the sheep that the business has.
Some years of poor seasons and late breaks the sheep enterprise moves into the next phase of offloading sheep to reduce the overall feed demand, utilising early stock sales and agistment to maintain a core flock of sheep.
What is the thinking process farmers need to follow?

- Retain and feed medium and high priority stock
- Sell the low priority stock
- Priority for allocating scarce spring feed
- What to do if cash flow is restricted.

Why does this year need more planning than normal?

In 2017, by July a lot of regions were well-past the first phase of increasing carrying capacity, and were into the phase of rationalising demand. Farmers can use guidelines to prioritise this process to help make the decisions in a rational and objective way.
Normally in the spring farmers use available feed to put condition on their ewes to get them ready for joining, and grow the lambs to get them ready for sale.
Indications for 2017 are that most areas of the state will have a reduced spring flush, and some areas of the Wheatbelt may not have a productive spring. The implication of a poor spring is that it reduces the cheap feed that farmers normally use to fatten their sheep, reducing liveweight (LW) gain of lambs and adult sheep. Anything that affects spring has a huge effect on the condition of the sheep going into summer, affecting carrying capacity and liveweight performance.
When things don't go well, farmers hope it will rain, and there is worry then mad panic when it doesn't. This is a normal process; the trick is to get from worry and panic to decisions and then actions.

1. Work to a plan: It may be an exit strategy (see below) or another sort of plan. Work to it with discipline. The plan can be modified when new information is received.
2. Consider the physical resources available: eg sheep, infrastructure, water, people, grain.
3. Finance (cash in bank, bank finance): This puts some constraints on what a farmer can do and what the time frame is. Without finance, time constraints are tight and sheep farmers need to act quickly.
4. Emotion: It's normal to be stressed in these times but if stress affects decision-making it creates problems for the business. Talk to someone.

Farmers who are unable to make decisions because of the stress must rely on people around them to help, in particular to add some structure around their decision-making to get them back on track. It's not useful for an adviser to just tell the farmer he needs to 'take control'. Farmers need to be objective wherever possible to get decisions based on fact and clarity. Emotional, subjective decisions have a real risk of being inappropriate. Intuition and gut-feel have a role but should not be the only information that a decision is based on.
Advisers should be asking their clients: do they have a plan, what is the plan? If they don't have a plan, act together to get one organised. What is the worst case they can think of? What is the most likely, and what is potentially the worst to expect? Consider the risks that are rational, and get a grip on the cash flow because that gives farmers options within a time frame.

Exit Strategy

Sheep farmers benefit from having an exit strategy: a pre-planned structure of how they are going to manage the seasons as they come. It is an orderly plan to back out of the season and keep things in control. Farmers who have an orderly, well-thought-out plan before they get into a situation can keep in control and have confidence that things are manageable.

Example exit strategy

Date of break	Potential SR (DSE/wgha)	Planned SR (DSE/wgha)	Tactic	Change in CP or SR	Actions
1st May	11	8			
7th May	10	8			
14th May	9	8			Scan ewes - 227 dry ewes
21st May	8	8			
28th May	7	8	Increase grain feeding by 100g Lupins/d	+500 dse CP	Buy 50t lupins
4th June	6	7	Sell dry ewes Increase feeding by another 50g lupins/d	-500 dse SR	Sell 227 dry ewes
11th June	5	5	Sell top line wether hoggets feedlot remainder	-844 dse SR	Sell 281 wethers Buy 50t lupins & 50t hay
18th June	4	5	Increase feed another 50g Lupins/d		Buy 50t lupins

Figure 3 Example of an exit strategy. Stocking rate (SR), dry sheep equivalent (DSE) winter-grazed hectare (wgha), carrying capacity (CP)

The focus in August for day-to-day planning should be on the next two or three months. It's too hard to think six months out as there are too many variables at play that can't be pinned down to make good decisions at the moment. By late August-early September, farmers will have more information to make decisions for the next two or three months after that. However, at the same time they do need to have a view on what could happen in the next six months: what is the best case, worst case, and what is most likely.

Timing

Budgeting is important because it helps the farmer to feel in control and objective about what is going to happen and it helps to keep a firm view on the cash flow and capacity to take advantage of various options. For it to be useful farmers need to monitor the budget closely, month to month and budget to actual, to identify whether they are underspending or overspending. This helps keep them in tune with their cash capabilities, and what operating capital they have.
It is important to plan supplementary feeding early. Work out what will be needed and buy the grain when it is well-priced. The risk of feeding is in the timing. If grain purchasing is delayed, everyone else is in the same boat and the price will be higher. The problem then is that when grain is expensive people feed less than they should. Farmers with grain on hand that they bought well are going to be able to feed their sheep what they need. Under $400/t for lupins is

pretty good. Farmers should expect that lupin prices next year will be high and the risk of carrying excess lupins into next year is low.
The earlier that sheep farmers recognise they need to sell sheep and act, the quicker the sheep are off the farm and the better value those sheep will make. If farmers wait until they have no option but to sell sheep, the risk is that everyone else is doing the same thing, the price has come off, and the sheep may not be in the same condition that they were a month ago, so the value is less in a depressed market. Farmers that get the timing of sale right can make good money.

Why keep sheep at all?

Why would farmers consider keeping sheep at all when it is potentially expensive and challenging? In a historical context sheep are currently quite profitable, and the fundamentals are very strong for sheep profit to remain high. This is a good reason to keep sheep in the farm business.

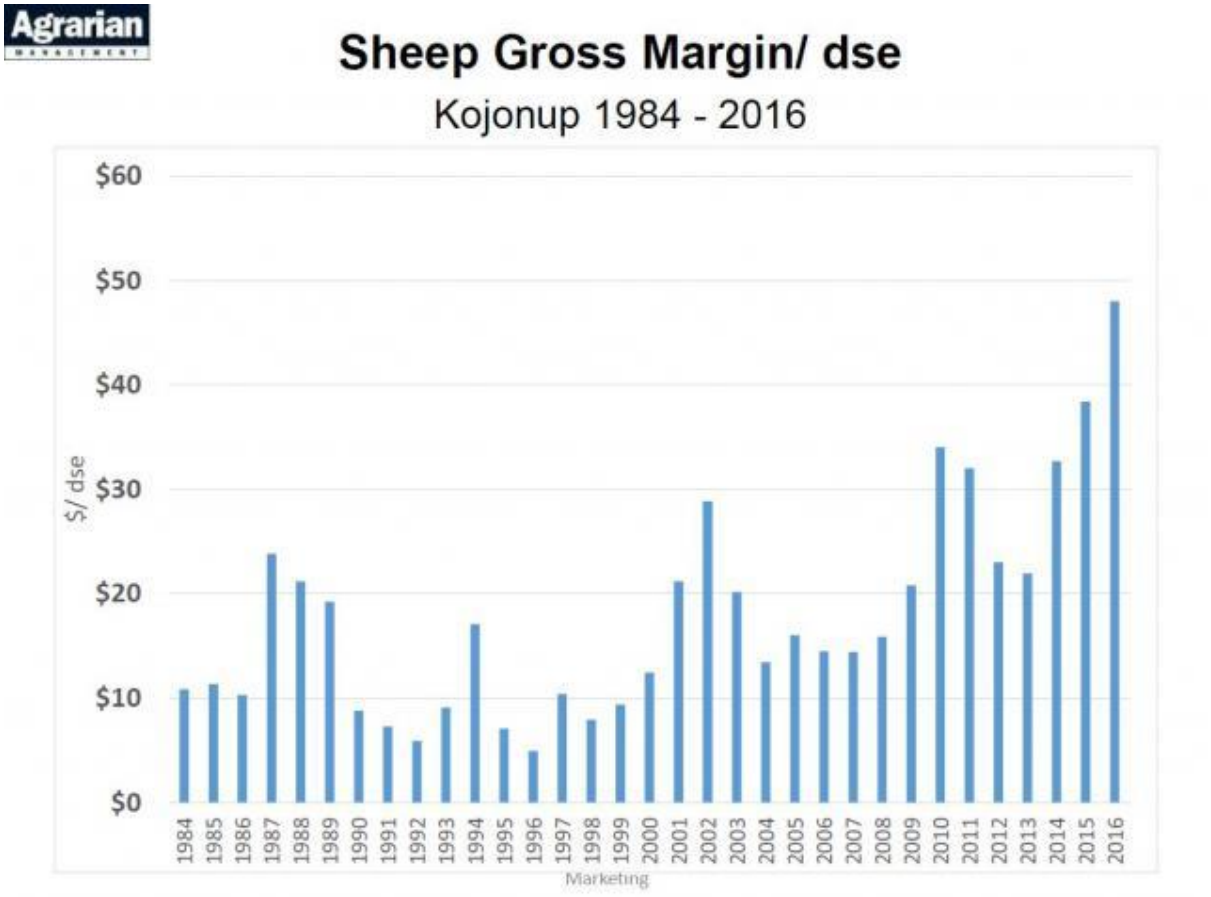

Figure 4 Sheep gross margin / DSE at Kojonup 1984-2016 in nominal terms of $ operating profit /DSE

Last year Agrarian clients at Kojonup achieved an average operating profit of $48 / DSE (Figure 4). Out of this the farmers paid interest, drawings, tax, overheads. It will be a bit less this year because of seasonal conditions.
When the 2016 level of sheep profitability is compared with the wool boom of the late '80s correcting for CPI, today's profitability in sheep is very close to the late '80s. There is a real boom in profit in sheep and it is substantially more than it has been.
When deciding whether to keep sheep in the farm business, farmers need to look at the farm operation and identify what value the sheep bring. If there is a strong role for the sheep in the farm business then it is important to carry as many sheep as the business can through a difficult spring. There is a lot of work and money and some risks involved in carrying sheep through a poor spring but the returns are there. Feedlotting sheep is a big commitment. If farmers are good

at it and prepared to put in the time and effort there are good returns if sheep are good for the farm business.
Considerations for choosing priority stock to be carried into 2018 season or those to sell:

- Likely carrying capacity in winter and spring
- Current known value versus potential future value of stock
- What stock can farmers reliably add value to
- Which sheep have the potential to lose value
- Access (cash/physically) to adequate feed and reliability of access
- Risk and reward to other livestock.

Every sheep kept on the farm affects the ones next to them, for example what the wethers eat affects the breeding ewes that are intended to remain on the farm into 2018.

Market options for 2017 lambs

Farmers currently have some solid options for selling lambs in this season.
The air freight market allows a market for lighter lambs.

- Weight grid is 12-22kg dressed.
- With a cross bred (XB) lamb dressing percentage of 41-42% and a Merino at 39-40%
    - XB starts at 32kg liveweight
    - Merino starts at 31kg liveweight

Other options include:

- Stores into a feedlot with a 25kg liveweight minimum
- Shippers. It's all about condition rather than frame size.

Feeding lambs to market weight

While lambs are typically weaned at 25kg, this year 20kg will be more likely.
Farmers need to plan what they will do with sheep and lambs to get them into markets. They may need to feed sheep $10-20 of grain up to a point to be able to move them off the farm.

What class of sheep is the priority to keep and feed?

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a copy of the executive summary and inputs to the modelling
watch the video of the Perth presentation
When paddock feed is limited and there is the imperative to invest in more supplementary feed than usual, it is useful to understand the priority sheep to feed or to sell and what the impacts of those decisions are on next year's enterprise.
In past recent droughts, farmers that acted quickly to reduce stock numbers in a timely manner came out the other end looking best.
It may be that all classes of sheep can be carried over the poor spring and summer but if there is minimal feed on offer (FOO) in the paddock and supplementary feed or confinement feeding of all of the sheep is too costly or not an option then the priority is the mature ewes.
Sheep to carry in decreasing order of priority (if sheep have a strong position in the farm business):

1. Mature ewes 2.5-3.5 years old
2. Rising maidens
3. Mature ewes 4.5 years old and older
4. Ewe lambs (2017 drop)

5. Wether lambs or wether hoggets.

Financial analysis shows that the priority class of sheep to keep are the middle aged ewes as they are the most productive, proven performers and have continued productivity for the enterprise for several more years. The analysis takes into account feed costs, production of lambs and wool that contribute to the profitability of the enterprise, stocking rate and competing stock classes.
Ewes that are not intended for mating next year are near the bottom of the list to keep.

Priority sheep to feed

The condition score (CS) of sheep is valuable information to have when determining the priority animals to keep and feed within a livestock class. For example, low CS ewes may be a low priority for keeping, but if retained they are a high priority for feeding.
Data from the Lifetime Ewe Management program show the effect of extra CS at joining on scanning percentage, the effect of CS at joining and liveweight change through pregnancy on birthweight, and the effect of birthweight on lamb survival. The data can be used to estimate the effect of feeding in the lead up to joining and through pregnancy on the number of lambs weaned.
This year feeding grain to sheep to gain weight can be profitable because of the high prices and the rebuilding margin (see later).
The Return on Investment (ROI) with grain $350/t

1. Ewes <CS 2.3 to gain weight to be mated (ROI approx. 500% on grain fed)
2. Ewes CS 2.5 to gain weight (ROI 40%)
3. Ewes CS 3 to maintain weight (ROI 50%)

Note: ROI of ewes <CS 2.3 to gain weight to be mated depends on the CS they start on and how much feed they need to get over the cut-off for joining.
The priority for retaining or selling good condition ewes versus thin stock depends on the current relative sale prices. Animals that are currently in good condition have a higher current sale value but require slightly less grain feeding. However, at the end of the year the thin ewes fed to gain weight and the good condition ewes fed for maintenance will be equivalent. A CS 2 ewe gaining 0.7 CS requires about 200 megajoules (MJ) more supplement than a CS 2.7 ewe maintaining for 12 months. At 2.5c/MJ that is $5.00 per head (/hd) so a premium greater than this for good condition ewes indicates that retaining the thin ewes and selling the fatter ewes should increase profit.
The decision whether to sell or retain the thinner ewes is associated with the quality of management of the thin ewes in confinement. Low CS ewes will be more difficult to manage because there is less margin for error. A strong relationship exists between CS at lambing and mortality. When CS is less than 2.5 at lambing the mortality rate of the ewe starts to increase. Mating ewes in CS < 2.3 is a high risk because the mortality rate will be higher during next year's lambing.

Analysis using current prices indicates the following order of priorities to feed

On green feed

1. The highest priority is that "at-risk" weaners gain weight ($20/kg). Gaining 1kg/month is sufficient and above this the value of further weight gain drops to between 20c and 50c/kg.
2. Ewes that are currently too thin to mate (CS < 2.3) are the highest priority adult sheep ($15/kg). Depending on relative prices these ewes may be a low priority to retain, but if they have been retained then they are a high priority to feed.

3. Thin ewes (CS 2.5) being mated to Merinos, especially if they had twins in 2017 ($2.90/kg).
4. Ewes in CS 3 or more and ewes in CS 2.5 to be mated to a terminal sire ($2.40/kg).
5. Lambs being fattened for sale ($2/kg).
6. CS 3 ewes to be mated to a terminal sire are a low priority ($1.90/kg) (although it still pays to feed for maintenance).
7. Ewes being fattened for sale are the lowest priority ($1.80/kg).

Note: Shedding breeds are a similar priority to Merino ewes mated to a terminal sire.
Putting the above into context, one tonne of high quality green feed will achieve about 150kg liveweight gain. If allocated to CFA ewes (point 7) the value is about $300, if allocated to CS 2.5 ewes (point 3) the value is $450 and if allocated to very thin ewes to achieve a joining weight (point 2) would get $2000 of value. Therefore there can be hundreds of dollars difference per tonne of feed in the paddock between allocating well and poorly.
The Merino-Terminal sire mating is a lower-priority however the return is received quicker than a Merino-Merino mating for which the return received is about 30% in the first year, 20% the following year, and the remaining 50% over the next 3-5 years.

In confinement

In confinement, the order of priority is the same as the priority on green feed.
Feeding maidens (and other low CS ewes) to gain weight if they are too thin to mate is a high priority and would increase profit by about $60/hd compared with feeding for maintenance and not mating. Based on recommendations supported by the Lifetime Ewe Management data, feeding ewes of CS 2.5 to gain an extra 0.2 -0.4 of a CS at joining will get 5-10% more lambs.
All ewes that will be mated next year can be profitably fed for maintenance and in most situations, high priority ewes gaining weight in confinement will be profitable. At current prices, the breakeven for feeding in confinement to gain weight is at CS 2.7 i.e. ewes at CS 2.7 or above should be fed for maintenance, all others can be fed to achieve a CS of 2.7 by next joining.

How long can farmers afford to keep the sheep? The Rebuilding Margin

Modelling has shown that, with current prices, farmers operating a Merino operation can afford to keep ewes in a well-run droughtlot for 365 days: lambing them in confinement, feeding them the full ration, and allowing for deaths and husbandry costs.
If the ration costs 2.5c/MJ (with lupins $350/t, barley $310/t, hay $200/t), then the cost of supplement ($110/hd) and husbandry ($25/hd) is offset by the value of the ewe wool production and the value of lambs weaned and the profit made is in the rebuilding margin.
Furthermore, the cost of grain feeding may be reduced if some stubble is available or some spring pasture growth is achieved and the sheep can be out of confinement for some period during the 12 months.
If the cost of the ration is 3c/MJ, then the breakeven period in confinement is reduced to 10 months.
The rebuilding margin is associated with the increase in value of the ewe retained (sale value this year compared with enterprise value next year). It accounts for the future profitability of the sheep enterprise, and how future profit will be higher if extra sheep can be retained.
If a farm business destocks, sheep are more valuable to the business next year than they are this year. If low priority stock are sold, such as dry ewes, the farm is potentially understocked next year, making extra stock next year more valuable. For example surplus young ewes are normally sold because there isn't room for them. However, if the farm was understocked compared to where it would like to be, the farm could keep cull young ewes, mate to terminal sires, get the wool and lambs and then sell the ewes at the end of the year.
The rebuilding margin might be $40/head, even if prices don't go up.

Furthermore, after a drought the supply of sheep onto the market is low and demand is high as people want to buy breeders back in again. It is therefore expected that prices in saleyards will increase next year.
Where sheep are an important part of the farm business, keeping the rebuilding margin in mind as part of the farm business calculations on profitability is important.
The rebuilding margin will be less for people who have alternative land use, for example if crop area can be increased then the understocking is less severe. However if farmers have already increased their crop area over the last few years, can it be profitably increased if the flock is sold down?
The rebuilding margin is also less for farmers if sheep production is not a core part of the farm business.
For a sheep enterprise with a Merino ewe mated to a terminal sire the rebuilding margin is small because the progeny are not normally retained. However, there is still the potential increase in the value of the stock, because to buy in Merino ewes next year will be a bigger cost to the business because they will likely be more expensive.

To mate or not to mate next season

There are two options for a sheep operation with no paddock feed that normally lambs before the break if it looks like there still won't be any paddock feed before the break next year:

- lamb in a droughtlot or
- consider not mating part or all of the ewe flock.

Ewes that aren't going to be mated can only be profitably retained in the flock if the rebuilding margin (increase in value of sheep next year) is greater than $60/hd. This margin is high and indicates that retaining thin ewes that won't be mated will probably only be break-even.
If the property has been partly destocked this year then long term analysis indicates that the rebuilding margin is approximately $40/hd if sheep prices don't increase.

Lambing in confinement

Lambing in confinement is relatively high risk. If there is no feed at joining which means that autumn lambing ewes would have to lamb in confinement there are two options: delay joining to lamb in June-July when there is likely to be green feed, or don't join the ewes.
Farmers without access to sufficient grain or cash to purchase it should sell ewes rather than plan to confine sheep and lamb in confinement. If the ewes are too skinny and not getting enough feed they won't do well at lambing.
Farmers considering lambing in confinement need to do the sums and have the capacity physically and financially to feed the ewes. It can be done but only by farmers with good sheep management skills. Twin-bearing ewes in the peak of lactation will require 1.8-2kg/hd/day of lupins.

What to do if cashflow is restricted

Farmers are potentially looking at 200-250kg of supplement per head if the sheep are in confinement until May 2018. There is a lot of money involved and how do farmers allocate grain in the sheep enterprise if cashflow is restricted or grain prices are high?
The return on investment becomes more important.

- Feed for maintenance ROI 50%+; break-even price 3.8c/MJ (at $500/T lupins)
- Feed for liveweight gain ROI 40%; break-even price 3.3c/MJ (at $450/T lupins)

- Allow CS 3 ewes to lose weight to CS 2.7 if they are likely to be in confinement for less than nine months. If the ewes will be in confinement for greater than nine months then it is more profitable to feed fewer ewes and aim for maintenance.

With the above targets, farmers with limited funds need to calculate how many sheep they can afford to feed. Sheep farmers that maintain their sheep through this time will ensure they are still valuable and can be sold later if required.

Conclusions

- Retaining and feeding ewes is profitable because of high meat and wool prices.
- Sell more lower-priority sheep if cash flow is restricted. The greater the cashflow restriction the deeper the cuts.
- Liveweight gain in confinement pays if condition score < 2.7
- Target maintenance for ewes greater than CS 2.7