



Feed Shortage 2018

Managing the spring surplus

Key messages

- ✓ The aim this spring is to maintain pasture quality and quantity and to conserve as much forage as possible
- ✓ Consider using nitrogen to create a greater surplus for conservation
- ✓ Consider maintaining feed inputs to create a greater surplus. Ensure that excellent pasture management is maintained if this option is used
- ✓ Optimise milk production from pasture by ensuring neither the quantity nor the quality is restricting intake
- ✓ Consider creating a larger surplus using nitrogen or maintaining feed inputs. Identify surpluses using ryegrass grazing management principles.

This spring, with fodder reserves very low, maximising and conservation of surplus feed grown will be a high priority. Conserving the true surplus is an effective approach to managing spring pastures as well as being able to fill feed gaps later. For those wanting to maximise the spring surplus this year, it may also be worthwhile considering the use of nitrogen to promote pasture growth as well as maintaining feed inputs. This will create a larger spring surplus and potentially reduce the amount of purchased fodder required. For further information on using nitrogen see the *Maximising spring feed with nitrogen* fact sheet at dairyaustralia.com.au/feedshortage.

During the spring the same pasture management concepts apply as at other times of the year. In brief, the two concepts are:

1. Graze pastures at 2–2½ leaves or canopy closure in the spring
2. Leave pasture residuals of between 4–6cm in height.

Holding a rotation that meets these two requirements will ensure neither the quantity nor the quality of pasture on offer are unnecessarily restricting intake/milk production. Using these guidelines pastures that are exceeding 2½ leaves or entering canopy closure are genuine surpluses and should be considered for cutting.

In the spring, these practices are harder to manage due to rapid pasture growth. The challenge in the spring is to calculate how much of the farm area should be grazed and how much should be conserved as fodder.

What is a 'true' surplus?

A true surplus occurs when pasture growth is in excess of the herd pasture requirements. If supplement/concentrate levels are at the desired level, the growth beyond what the herd requires at the current rotation, or the amount being wasted is the 'true' surplus. If concentrates are at a higher level than desired, this is an opportunity to reduce the concentrates being fed.

How to identify a 'true' surplus

Assuming pastures are being managed according to the ryegrass management principles, a true surplus can be identified when the herd is:

- › Leaving more than the desired residual of 4–6cm
- › Leaving bigger clumps and
- › Wasting pasture, i.e. the herd is being offered more than is being eaten

Identifying the surplus early is critical to managing the quality of pastures through the spring.

Managing the surplus

If pasture wastage is observed consider the following actions.

- › Reduce supplementary feeding levels to increase pasture intake. Savings in feeding needs to be considered alongside any changes to milk production (solids not litres).
- › Reduce the area allocated to the herd. This maintains the grazing pressure on the area offered to the herd but in effect is slowing down the rotation, increasing pasture cover, which if not managed will reduce the pasture quality and potentially the pasture density.
- › Reduce the area allocated to the herd and take out of the rotation paddocks to conserve for fodder. This then allows for the conservation of the 'true' pasture surplus. If current growth rates are expected to be maintained or improved this will increase the genuine surplus and the area earmarked for cutting/mowing.

Reduce the area allocated

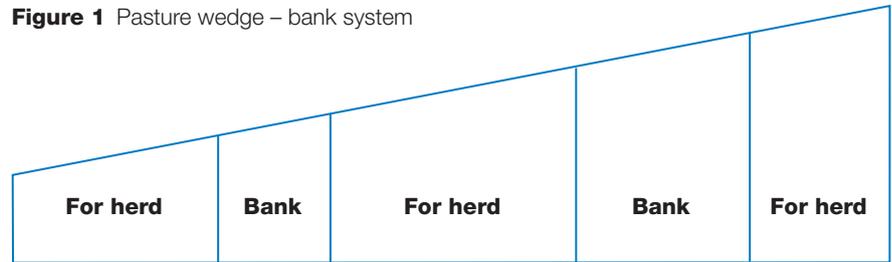
Offering the herd a smaller area on a daily basis but maintaining the rotation length to keep the grazing pressure and pasture residuals constant allows paddocks to be dropped out of the rotation for conservation.

Rotation length is based on the leaf emergence rate and should be maintained so that cows are grazing paddocks at the target leaf stage while the grazing pressure is maintained. Reducing the area maintains the grazing pressure and enables target residuals to be achieved.

To calculate the total area to offer the herd for the rotation, estimate how much area per day is required to feed the herd for a grazing and multiply this area by the estimated rotation length. Typical rotation length in the spring is between 21–33 days. The rest of the area is surplus and may need to be taken out for conservation. The area closed for conservation is then calculated taking away the reduced grazing area from the total area.

If growth rates are expected to be maintained or improved cut this amount. If growth rates are expected to slow take a smaller amount, maybe 50–75%, out for conservation.

Figure 1 Pasture wedge – bank system



The area taken out of the grazing area for conservation can always be changed. If too much is taken out, cows will tend to overgraze at the next feed. If this happens put some of the area taken out back into the grazing area. If too little is removed from the grazing area, the cows will still leave too much behind at the next feed. Remove more area from the grazing area to conserve.

There is a limit to the amount of pasture that the cows will choose to eat so if

- › too much pasture is offered or
 - › if pasture quality drops (by getting rotation length wrong)
- the cows will waste more pasture.

Strategically choose paddocks to take out of grazing area

Choose the paddocks that you want to put aside for conservation, based on ease of conserving, best paddocks, or good to cut for silage in the next rotation. It is best not to take out the next paddock to be grazed. Take paddocks out that are at a range of leaf stages e.g. leaf stage 1 and leaf stage 2.

Figure 1 illustrates the 'pasture wedge' and the paddocks taken out for forage conservation. This system is called the 'Bank system'.

Advantages of using this system are that:

- › Cows are always being offered the highest quality feed that they need (not what is left over)
- › Surpluses are conserved as higher quality feed
- › The rotation length is easier to manage (using the bank to manage changes in growth rates)
 - If growth rate slows, withdraw from the bank
 - If growth rates improve, make a deposit in the bank.

You don't have large areas 'recovering' from the fodder conservation program at one time. Instead the areas that were cut for silage come back into the grazing rotation at different periods – and this again reduces the 'feast to famine' effect. If all the fodder is cut in one hit, all this area is ready to graze again at the same time – and this can be difficult to manage.

At some stage the growth rate will slow and the cows will be able to eat all the pasture that you offer to them. At this stage return to the rotation using the whole farm grazing area. Top any low quality pastures, and potentially use nitrogen to boost the growth of the pasture that is still growing.

Following are some quick tips on paddocks to choose for conservation.

- › If paddock is higher than ideal pre-grazing cover, conserve ASAP.
- › Give priority to paddocks with higher proportion of stems and leaves.
- › Ideally don't cut the same paddock twice.
- › Avoid newly sown perennial ryegrass paddocks.
- › Cut no more than 6 weeks from the date of the last grazing – leaving longer will cause loss of tiller density, reduced regrowth and reduced persistence.
- › Cutting earlier – at canopy closure or 2 ½–3 leaf stage will reduce the silage yield, but the silage quality will be better, regrowth quicker and tillering improved.
- › Keep closure period short to achieve higher quality silage. As ryegrass plants become reproductive and the proportion of stem to leaf increases the energy and protein levels will decline.
- › As soon as the paddock is cut it should be considered to be 'grazed' and added back to the grazing area. In some cases silage regrowth paddocks will require an additional 4–7 days than grazed paddocks.

In summary, by managing the spring pasture surplus **pasture quality will be controlled.**

Rotation length is the biggest driver of pasture quality. Offer the herd pasture that is at the best stage for grazing in the spring i.e. 2–2½ leaf stage or before canopy closure. Adjust the rotation as the pasture growth rate changes to keep the paddock that cows are going into at this ideal grazing stage. Loss in quality due to stem elongation or beyond canopy closure reduces quality and pasture intake.

The spring pasture surplus can be managed by:

1. Allocating the right area of pasture each feed to stay in control of pasture consumption and grazing pressure.

2. Focusing on the rotation length and allocation of pasture to the herd each feed, you have automatically determined the spring surplus that should be conserved as fodder.
3. Staying in control of the post-grazing residual. Three options to consider if cows leave too much pasture behind – top the paddock; add another class of stock; or make the paddock into silage on the next rotation. Silage may be of slightly lower quality, but better to capture the feed.
4. Adjusting your concentrate (supplement) feeding levels if required.

- › On most farms, excess pasture will need to be conserved as hay or silage to minimise wastage and maintain pasture quality.
- › Strategically plan to lock paddocks up and remove from the rotation rather than removing paddocks when they are above the target pre-grazing cover.
- › Conserving surplus pastures at 2½–3 leaves will maximise regrowth (quantity and quality), encourage tillering and result in higher quality fodder.
- › Keep closures short and avoid cutting paddocks twice
- › For tips on conserving forage see *Quality pasture silage – Five easy steps* at dairyaustralia.com.au/feedshortage.

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