



awi Australian Wool
Innovation Limited

RELEASING SHEEP FROM CONTAINMENT FEEDING



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INTRODUCTION

Containment areas or droughtlots, are purpose-built facilities used to feed and manage sheep during times of low pasture availability. They can help to minimise pasture and environmental damage from overgrazing, reduce the labour costs associated with hand-feeding sheep and better manage animal condition through reduced energy requirements and more targeted feeding regimes.

Containment areas are designed to be used as a short-term management strategy and once sufficient rainfall has been received to initiate pasture growth, stock will typically be released. However, managing this transition from containment to pasture must be done carefully to minimise the risk of any animal health issues, particularly for pregnant ewes, as well as ensuring that wool quality is not affected.

GUIDELINES FOR RELEASING SHEEP FROM CONTAINMENT FEEDING

Prior to releasing sheep from containment, consideration of the paddock conditions, animal requirements and the timing within the production cycle should be considered.

Paddock Conditions

Given that stock would typically be released from containment as the season breaks; paddock conditions at this time are rapidly changing and therefore assessments of the paddock should be reviewed regularly throughout the transition from containment to pasture. In addition, the timing of the break of season can significantly affect the rate at which pastures will grow given changes to soil temperature and day length. In assessing whether sheep should be released from containment onto a pasture, key considerations of paddock conditions should include feed on offer (FOO), pasture growth rate (PGR) and pasture quality.

Feed on offer (FOO)

The first consideration is whether sufficient quantity of feed is available to support a particular class of sheep to be released from containment. The quantity of feed (combined with the quality) is a predominant driver of nutritional intake for stock. Limited FOO will reduce the potential feed value and may not meet animal nutritional requirements resulting in a reduction in body condition score and possible animal health issues.

- Dry sheep should not be released from containment without supplementation until a minimum of 500kg dry matter per hectare (DM/ha) of pasture is available.
- Ewes in late pregnancy should not be released from containment without supplementation until a minimum of 1,000kg DM/ha of pasture is available. Higher FOO is desirable for twin bearing ewes.
- Ewes at the point of lambing or in lactation should not be released from containment without supplementation until a minimum of 1,200kg DM/ha for single bearing ewes or 1,500kg DM/ha for multiple bearing ewes is available.

- The online AWI Feed On Offer Library (see Further Resources on page 11) can assist to make assessments of pasture availability. Additionally, courses such as Lifetime Ewe Management can provide the skills to make accurate pasture assessments.

Pasture growth rate (PGR)

While FOO presents the starting quantity of pasture available in the paddock for stock to graze; PGR is a measure of the speed at which pasture can grow and ideally increase in availability if the targeted minimum FOO is not available.

In assessing whether it is suitable to let stock out of containment to graze pastures, an important consideration is whether the paddock(s) will provide sufficient grazing length to warrant the move from containment to pasture. The days grazing provided by a pasture paddock will be determined by the available FOO at the start of the grazing period, plus future available feed from pasture growth (assuming the assessment is made within a growing season). If stock were to be released onto a pasture with low FOO, then PGR must be in excess of livestock consumption rate to allow the pasture to increase in quantity.

For example, if a mob of 250 ewes in late pregnancy with a DSE rating of 1.6 each (equivalent to 1.6kg DM/head/day) were to graze a 40ha paddock, the total pasture consumption rate in this paddock would be 400kg DM/day (250head x 1.6kg DM/head/day = 400kg DM/day). Therefore, the pasture would need to be growing at greater than 10kg DM/ha/day (400kg DM/day ÷ 40ha = 10kg DM/ha/day) to allow any increase in pasture availability.

FIGURE 1 shows the number of days required to reach a target FOO given varying PGR. For example, it can be seen that if a minimum of 500kg DM/ha is required before stock will be released onto pasture; given an assumed PGR of 15kg DM/ha/day, it will take approximately 33 days to grow sufficient feed for stock to be released.

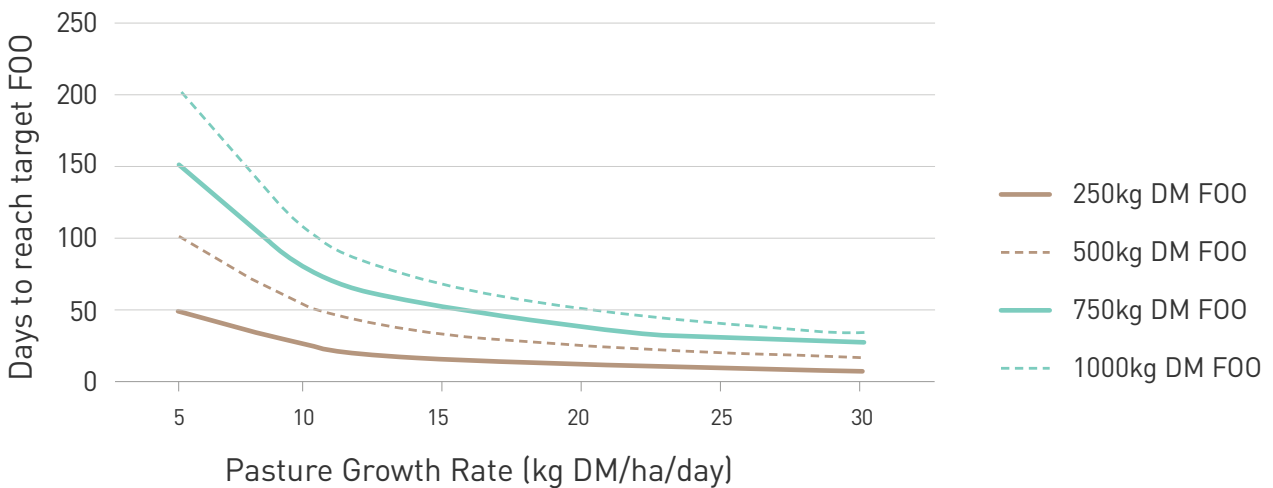


Figure 1 - Days to reach target feed on offer given varying pasture growth rates (source: Hamish Dickson, AgriPartner Consulting).

PGR will vary across region, season and plant species and it is important to gain an understanding of the PGR when assessing paddock conditions for releasing sheep from containment. Regional average PGR can be found from resources such as Making More from Sheep (Figure 2).

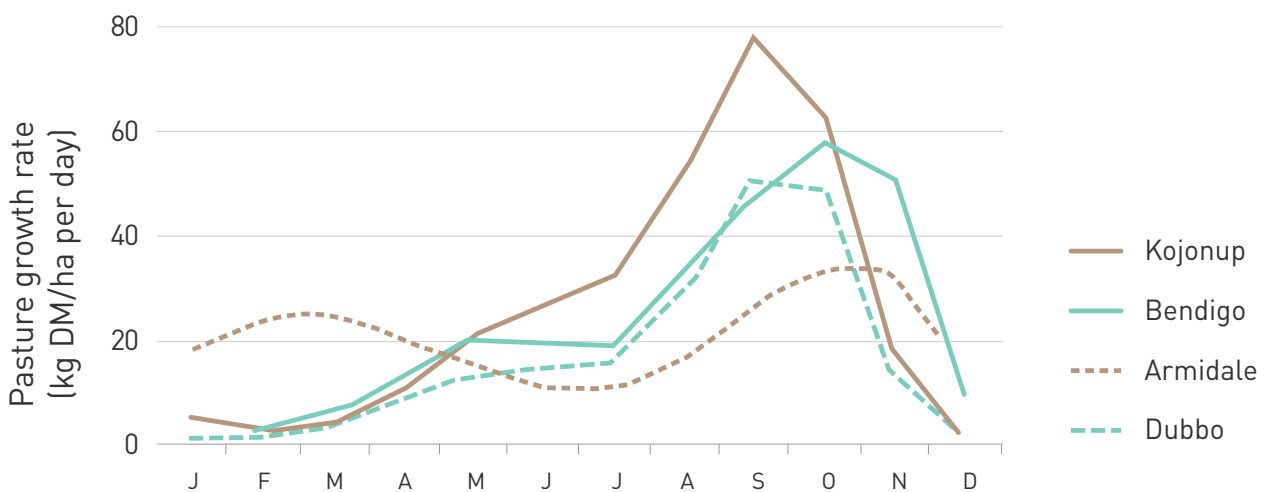


Figure 2 - Example pasture growth curves throughout the year for four locations across Australia (source: adapted from GrassGro® 1965 - 2002, Making More From Sheep).

Pasture quality

Whilst utilising pastures as opposed to feeding in containment will typically be a more cost effective strategy, if a limited amount of pasture is available and not all animals can be released from containment at once, or there is significant variance in the quality of pasture available, it should be assessed as part of determining if paddock conditions are more or less suitable for a particular class of sheep.

FIGURE 3 shows typical feed quality results for pasture at different stages of growth and it can be seen that for fresh, actively growing pastures feed

quality, as measured by digestibility, energy or protein, is typically very high. Whilst this high quality feed will support most classes of animals, if limited amounts of pasture are available its strategic allocation to particular classes of animals may be beneficial. For example, if both ewes in early pregnancy, as well as young growing stock were present on farm, it may be decided that the high energy and high protein pasture is better suited to the young animals to support growth, while the mature ewes remain in containment for a short while longer as the pasture quality at that stage would provide excess protein to their requirements.

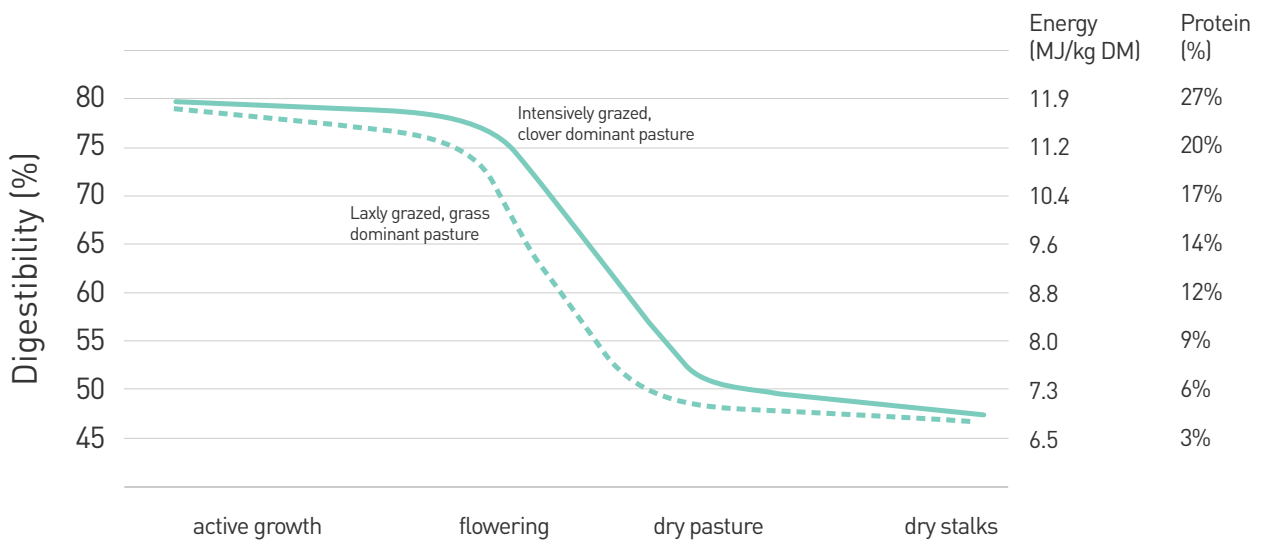


Figure 3 - Average pasture digestibility, energy and protein content at different stages of plant growth (source: adapted from M. Hyder, DAFWA).

ANIMAL REQUIREMENTS

In assessing whether sheep should be released from containment, key considerations should include the current body condition score of sheep, their nutritional requirements and the stage of production within the farm operation.

Body condition score

Prior to releasing stock from containment, consideration should be given to the body condition score of adult sheep and whether feeding is best managed in the paddock or containment. Particularly when a wide variance in body condition score of animals is present within the flock, it may be appropriate for some animals to remain in containment a short while longer to more closely manage the feeding of these animals. Unless a large amount of high quality pasture is available for all stock, typically low body condition score animals would be suitable to remain in containment for a longer period of time and fed an appropriate (high energy) ration to increase body condition score in line with the remainder of the flock.

Resources such as the Lifetime Ewe Management and the Lifetime Wool Ewe Management Handbooks can provide further information on differential feeding requirements to manage body condition of animals.

Nutritional requirements

Similarly to assessing pasture quality, in the situation where all animals cannot be released from containment at once, it is important to assess the nutritional requirements of each class of sheep to determine which group should be released first and which should remain in containment.

Nutritional requirements of sheep will vary depending on their class, mature reference weight and target condition score. To determine the nutritional requirements of each group, refer to guidelines such as the Lifetime Wool feed budget tables (see Further Resources on page 11), Feeding and Managing Sheep in Dry Times and

resources within the Lifetime Ewe Management program. This information will provide direction for determining which class of animal should be released first. Through understanding the nutritional requirements of each group, a comparison to the available feed quality from both pasture and containment rations can be assessed and the most cost-effective feeding strategy for each group of animal can be determined.

PRODUCTION CYCLE

In determining when to release sheep from containment, not only are paddock conditions and animal requirements an important consideration, it is critical to understand what limitations exist regarding the production cycle on the farm. These considerations include the time of lambing, as well as other farm operations that may limit the management of releasing stock from containment.

Time of lambing

Releasing sheep from containment typically results in a significant change in diet, as well as a level of stress through mustering stock from the containment area to the pastures available. These impacts are best avoided as much as possible for ewes in late pregnancy. If ewes are in containment during late pregnancy it is important to regularly review the plan for releasing stock from containment to ideally be able to release animals as soon as possible. Where possible, plan paddocks for ewes in late pregnancy to be close to containment areas and minimise the mustering involved when releasing pregnant ewes. Whilst lambing in containment can be managed with careful planning and additional management activities, it is best avoided wherever possible as it can increase the risk of mismothering. If lambing in containment is necessary, seek management and feeding advice for containment feeding of lambing ewes.

Other farm operations

Whilst management of sheep in containment should always be a high priority for farm operations given the complexity and risk involved, the reality is that other farming operations are taking place at the same time. Particularly for a mixed enterprise farm, if stock are in containment at the break of the season, farm operations are also likely to be very busy with seeding activities. Under these circumstances, consideration should be given to whether there are sufficient resources available on farm to fully manage both the containment area, as well as any other farm operations at the time. If labour, or other resources, are likely to be limited, then

consideration should be given to releasing stock from containment early, or if this will be too detrimental to stock, then additional labour or resources may be necessary to continue feeding stock in containment.

MAKING THE DECISION

Once assessments of the pasture available and the animal requirements are made, the decision must be made as to whether stock should be released from containment or not. The decision support tree below is designed to assist in the key decision-making processes regarding whether stock should be released or continue to be containment fed.

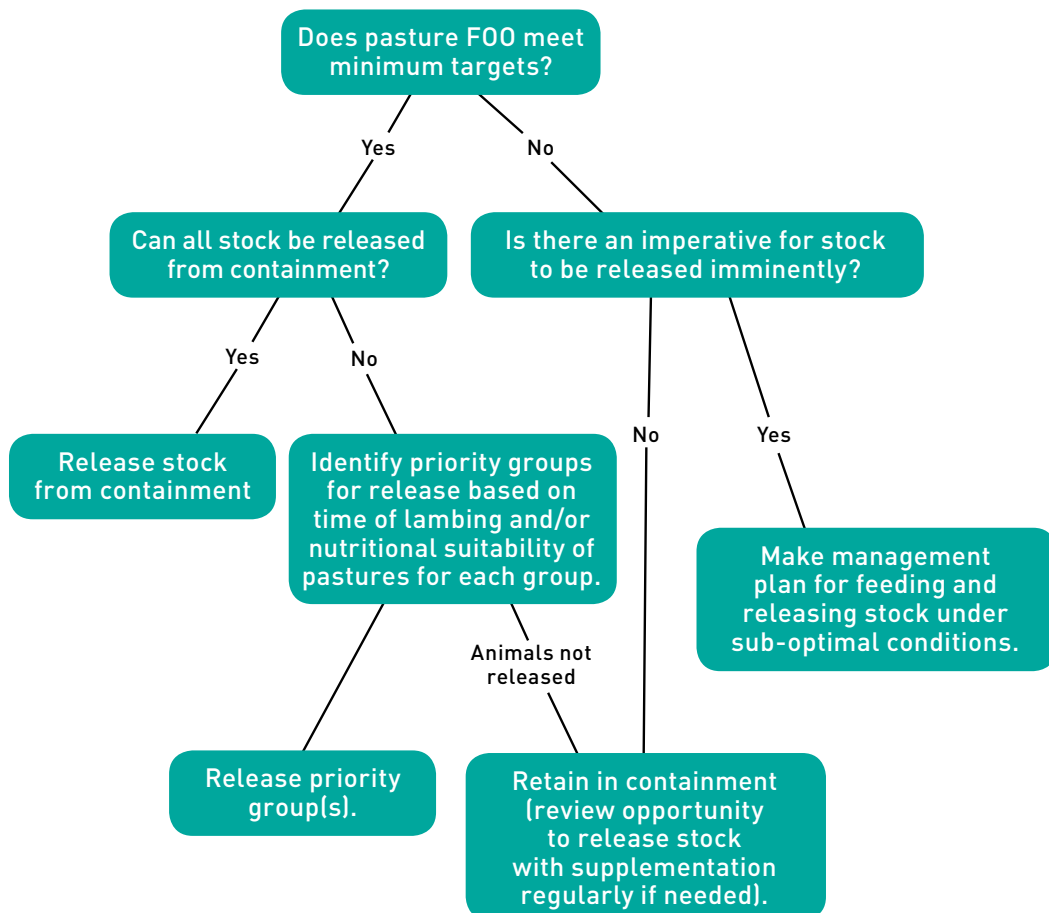


Figure 4 - Decision tree for key considerations of when to release stock from containment (source: Australian Wool Innovation).

MANAGING THE PROCESS

Once the decision is made that stock are going to be released from containment, the next key consideration is planning the release to manage the health and productivity of stock.

The main considerations are to ensure that the diet transition from a containment ration to green feed is done as smoothly as possible and that animal health issues such as pulpy kidney, pregnancy toxæmia and hypocalcaemia are avoided.

Before the move

Sudden changes in feed quality, particularly where sheep move rapidly onto high quality pasture, can increase the risk of pulpy kidney. If stock have not been vaccinated in the three months prior to release, vaccination at least 10 days prior to release is advisable.

To minimise gorging of pasture when stock are first introduced to the paddock, ensure that sheep have ad lib access to good quality, palatable hay for 24-48 hours prior to release from containment to ensure stock are not hungry when they move onto the pasture.

If stock are moving onto calcium deficient pastures (requiring calcium supplementation), then the provision of the calcium supplement prior to release for familiarity for stock may be recommended (seek advice if other supplements are also being provided).

Release

To minimise gorging of pasture when stock are first introduced to the paddock, release animals from containment onto pasture late in the day, after feeding when they are not hungry.

Particularly for pregnant ewes, wherever possible minimise any stress involved in the move from mustering, handling, etc.

Some producers have found that moving stock onto pastures for short periods of time initially and increasing the time each day, can assist the transition from containment. Where this can be easily achieved, it may provide good results. However, it is often an impractical strategy and can result in more disturbance of the animals through increased handling if stock must be moved long distances.

After the move

Supplementation with the containment ration should be continued for a minimum of a week after releasing stock from containment to assist the nutritional transition. The containment ration should be provided in the paddock immediately for stock to ensure consistency of feeding. Particularly where grain is fed, this is important to minimise the risk of acidosis. Ensure that all stock have access to any supplementary feed.

Where FOO or the nutritional quality of the pasture warrants supplementing stock with feed beyond the first week after release, this should be continued in a consistent manner to ensure animal health and productivity.

Where sheep are released onto calcium deficient pastures, such as cereal crops and occasionally grass-dominant pastures, supplementation with a high calcium and magnesium content supplement should be provided.

Other nutritional imbalances should be assessed given the pasture to be grazed and any deficiencies managed appropriately.

FURTHER RESOURCES

AWI drought resources – www.wool.com/resources

AWI Feed On Offer Library – www.feedonofferlibrary.com

Lifetime Wool Ewe Management handbooks – call the AWI Helpline on **1800 070 099** to order your copy

Lifetime Ewe Management – www.wool.com/LTEM

Lifetime Wool feed budget tables – www.lifetimewool.com.au/Tools/B0Stables.aspx





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