

Animal Health Update

South East Local Land Services

June 2019

WINTER CONDITIONS SPECIAL

Alex Stephens District Veterinarian Yass.

At this stage of a drought, or run of dry seasons, everyone's situations will be different depending on their earlier decisions and drought strategy. Some may have destocked substantially earlier and others may have been feeding for 12 months and have animals in feedlots. In the middle, most producers are either destocking further or will engage in some form of supplementary feeding to match stock requirements with available feed this winter.

Your drought strategy depends on your priorities, such as profitability, animal genetics, or the long term sustainability of your pastures. It also takes in your restraints such as physical, time and financial constraints. Animal welfare, including ensuring that stock have adequate feed and water, is not just an ethical priority but also a legal requirement.

The most important thing to do at this stage is to reassess your current position and reevaluate your decisions monthly. Your current position includes taking an inventory of the following three factors:

1. Your financial, physical or time constraints.
2. The physiological state of your stock including their fat score and stage of reproduction.
3. Your grass and water position, your grass budgets, and feed on hand for future stock requirements.

You may decide that you want to brush up on your condition scoring or pasture assessment skills, or contact a rural financial counselor for advice.

Rejoining a Prograze refresher group, researching online and attending a drought meeting may assist with this, as will asking for assistance from your local District Vet or Agriculture Advisor, who can provide support for your decision making.

Here are some tools that can assist you with decision making:

MLA pasture ruler: http://www.makingmorefromsheep.com.au/turn-pasture-into-product/tool_8.6.htm

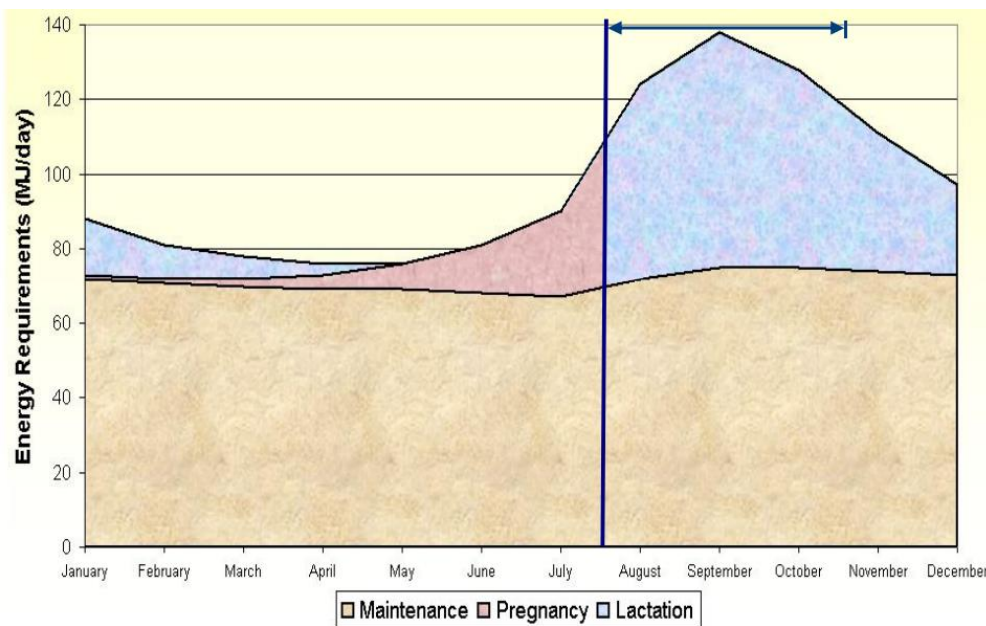
Fat and condition scoring cattle: <https://mbfp.mla.com.au/Weaner-throughput/Tool-52-Condition-scoring-beef-cattle>

Condition scoring sheep: <http://www.lifetimewool.com.au/conditionscore.aspx>

ANIMAL HEALTH POINTERS FOR WINTER

The most likely cause of animal health problems this winter will be in relation to a deficiency of energy. It is important to understand your stock requirements, especially in relation to their stage of the breeding cycle. To match energy to requirements, firstly you need to be able to assess pasture for energy and protein quality and quantity and then assess stock requirements. Stock requirements vary considerably throughout the reproductive cycle. Cattle requirements are represented in the graph below. The shape of the curve is similar for sheep, but higher and narrower, with requirements for sheep at lambing being 1.6 times maintenance and that of lactating ewes being 3 to 4 times maintenance.

Figure 1: Energy requirements of 550kg British Breed Cow – unrestricted feed (calving 1 August)



Source: Jeff House 2016 (data obtained from Grazfeed)

In green droughts the quality of feed is high and protein is adequate however the quantity, or the height of the pasture and ground cover, limits energy intake. The energy deficit is either filled by weight loss in the stock or supplementary feeding. Weight loss is acceptable to a point but cattle that calve down in lower than fat score 2.5 may have difficulty getting back in calf the next year.

It is important to consider the animal welfare of your stock, and have trigger points in mind for both production and welfare. Once cattle fall below a fat score 1 (body condition score 2), as demonstrated in the diagram below they require a high level of management and supplementary feeding to prevent further loss of condition and welfare concerns.

Cattle below this condition score become less valuable and more difficult to transport. Emaciated cattle become unfit to load. It is better to cost out your feeding options and sell early if you cannot feed all the way through. Late pregnant cattle below fat score 1 that are continuing to lose weight due to an inadequate ration are at risk of death from a lack of energy to calve successfully or pregnancy toxæmia. Note that when pasture conditions and growth are limited, cattle and sheep should not be co-

grazed as sheep graze closer to the ground limiting the feed availability for cattle. Pasture growth rate and stocking rate during winter is also an important consideration when calculating rations.

For supplementary feeding rates see: <https://www.dpi.nsw.gov.au/climate-and-emergencies/droughthub/information-and-resources> or for cattle see – [cattle winter feeding guide](#).

A rough ball park guide to keep in mind when calculating feed requirements is the 1,2 3 rule, which is that for a 10MJ feed type stock require 1% of their body weight daily for survival, 2% for maintenance and 3% for production.

Energy allowance for Chill.

Chill factor is the combination of low temperatures and or rain and wind. This can significantly increase the requirements of both cattle and sheep. Sheep off shears are most at risk for the first 6 weeks off shears. 20% more feed will be a minimum requirement even in relatively mild conditions. Good quality hay is the best source of extra feed during cold stress periods, however in sheep that are well conditioned to grain feeding increasing their grain allowance before and during an event will greatly reduce stock losses.

Animal health risk reminders

- a) **Acidosis:** eating too much grain too quickly results in a build-up of lactic acid in the rumen. It is most usually a problem at the start of a drought feeding program involving grains or nuts, prevented by a slow grain introduction program and use of buffers. Later in the drought it can be caused by a requirement to switch to a hotter grain such as wheat due to availability problems. It is very important to plan this switch well before you have run out of the original grain as shandying the cross over using a 20:80, 40:60, 60:40 , 80:20 method provides the best results
- b) **Pulpy Kidney:** any stock receiving supplementary feed or exposed to sudden pasture changes such as a green flush are at risk of gut disturbances that can result in sudden death from this clostridial disease. Best prevention is frequent, every 3 month, 5 in 1 boosters, particularly to young growing stock as they are the most vulnerable, and cows and ewes pre-calving and lambing.
- c) **Ketosis:** pregnancy toxaemia is principally caused by an energy deficiency discussed above resulting in toxic circulating ketone bodies. Animals become collapsed, dull and dazed. Even with veterinary treatment the condition is hard to reverse. Prevention is best, pay particular attention to avoiding stress on late pregnant animals when brought through the yards for routine procedures and minimise as much as possible time off feed.
- d) **Balance for Calcium, Salt and Magnesium:** ensure the diet you are feeding is balanced. Grain based diets are particularly high in phosphorus and deficient in calcium and salt. All grain based diets need to be supplemented with lime (calcium) at a rate of 1-2% of the weight of the grain fed and salt a 0.5%. This supplementation is to prevent diseases such as rickets in young growing lambs and milk fever, or hypocalcaemia in lambing ewes. If promptly treated this condition can respond to 4 in 1 flow packs, but again prevention is best. Hypomagnesemia or grass tetany can be seen when grazing cereal crops or on grass dominant short green pick. Cattle, particularly older cattle with calves at foot are most at risk. Cattle on short green pick should ideally be supplemented with hay treated with approximately 60g of causmag per cow per day. Grass tetany lick blocks are another option, as is providing loose licks of calcium, magnesium and salt.
- e) **Exposure** is the number one killer of lambs. Lambs are born with a built in energy supply called brown fat around their kidneys which is used as an energy reserve. This reserve is used in their first hours before they feed and in their first week against adverse weather events. Lambs burn their energy reserves to stay warm and keep their body temperature at a functional level, the greater the challenge the faster they run out of energy. This is the number one killer of lambs

and is largely prevented by ensuring the ewes are on adequate nutrition and by ensuring that ewes are lambing in paddocks where they can access shelter.

- f) **Plant toxicities:** the most usual time to see plant toxicities is when hungry stock eat plants they would normally leave alone or when hungry stock are given access to pastures or hays that are high in nitrates. Always introduce new feed slowly to allow animals to adapt, and avoid grazing actively growing cereal crops during cloudy weather or in the early morning. Stock on green fodder crops should also be provided with access to roughage.
- g) **Parasites:** it is important not to forget routine parasite management, as nutritional stress places stress on the immune system and all animals are grazing close to the ground in the larval pick up zone. All stock, but particularly young and pregnant animals, lose their normal resilience. If fluke is an issue on your property it is important to use a winter treatment to control fluke. This greatly reduces the pasture infectivity the following summer. Winter treatments should contain an active ingredient that will treat immature fluke as well as adult fluke.

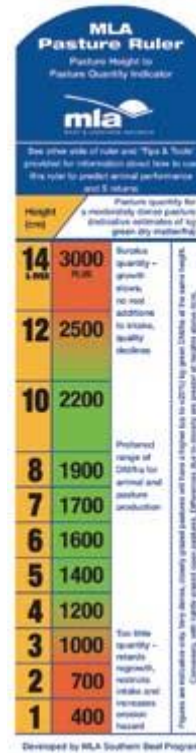
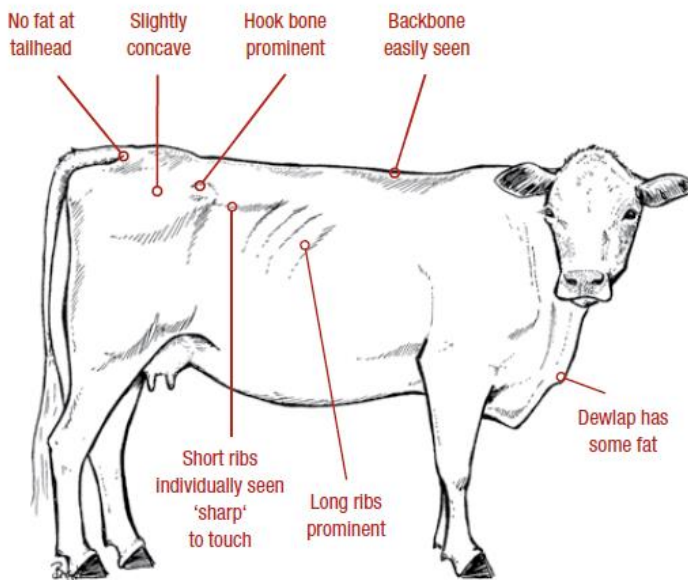
Adult cattle usually do not require worm control, but if cattle are under nutritional stress and grazing close to the ground a winter worm control is advised.

Weaners should be monitored frequently during the winter using faecal egg counts (FECs). Winter scour worms need to be monitored and treated for.

- h) **Trace mineral and Vitamin deficiencies.** While green feed is abundant, deficiencies of Vitamin A, D and E are unlikely. Vitamin A should be supplemented by injection if stock are being grain fed and have not had access to green feed for more than 3 months. Any orphaned calves or lambs being bottle fed should have a Vitamin A supplement injection. Selenium deficiency may become an issue this year in known deficient areas, especially where clover intake is a high proportion of the diet. If you have ever had a history of selenium deficiency on your property it is likely that your stock require selenium supplementation. A blood test of your youngest stock in spring is the best confirmation of a deficiency. Selenium deficiency can be prevented in sheep and cattle by use of both short and long term supplements.

Appendix: Fat score 1/condition score 2 cow

(a) B-E 1 or BCS 2 *Bos taurus* breeds and cross breeds



ANIMAL HEALTH BENEFITS OF SHELTER BELTS

Alexandra Stephens District Veterinarian

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A recent workshop was held at Binalong as a joint project between the Binalong Landcare group, the Sustainable Farms branch of the ANU and South East Local Land Services. Participants saw a great example of the long term effects of whole farm planning and examples of both recent and well established shelter belt plantings.

Some of the key messages from the day on the benefits of shelter belts to animal health were:

- protection from wind chill - savings on feed requirements and reduction of stock losses post shearing
- reduction of neonatal losses as exposure is the number one cause of losses at lambing
- provision of shade, particularly though heat wave conditions
- increase in bird life and biodiversity
- environmental enrichment both for the sheep and the producer.

One of the most important roles a shelter belt can play is the protection of livestock from exposure during harsh weather conditions. Prevention of lambing losses is where the greatest economic benefit for shelter belts can be seen. Lambs are born with a built in energy supply called brown fat around their kidneys which is used as an energy reserve. This reserve is used in their first hours before they feed and in their first week against adverse weather events. Lambs burn their energy reserves to stay warm and keep their body temperature at a functional level, the greater the challenge the faster they run out of energy. This is the number one killer of lambs. Trials conducted in south east Australia indicated that losses of newborn lambs were reduced by 10-50% by use of shelter belts. The greatest benefits are seen in the Tablelands. The barer the paddock, and the chillier the cold, wet wind the greater the benefit. Benefits for merinos are more marked but benefits also apply to crossbreds.

The design and type of shelter is important to consider. It is important that shelters do not encourage sheep to overcrowd or smother, channel wind or cause increased wind turbulence on the leeward side. It is also important that the ground is not concrete, rocky, wet or shaded in the mornings as this will not help to keep sheep warm.

To optimally design a shelter for the benefit of stock consider the following points:

- The length, height and density of the break determines the area of protection it provides. For maximum area protection a belt would contain taller species on the windward side and shorter species and shrubs on the down-wind side
- Generally a multi-rowed break with a density of 60-80% will protect a down-wind area of 15 times the height of the windbreak
- Shelters should be two rows at least (ideally four) and a good even density at ground level (particularly the first metre of height) so that it achieves better protection down low and guards against the loss of individual plants. A planting mix of 40% trees and 60% wattles and/or shrubs will achieve this
- Consider not just the prevailing winds but where the most damaging winds come from. Remember that when the wind starts to blow sheep will walk away from the wind, so consider placing shelters downwind in the paddock
- Remember the warming sun rays. Design belts so that sheep can sit in the morning sun but be protected from the wind. Afternoon shading will be a benefit in the summer months
- A good length of pasture such as phalaris or tussock will also provide wind protection for young lambs.

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